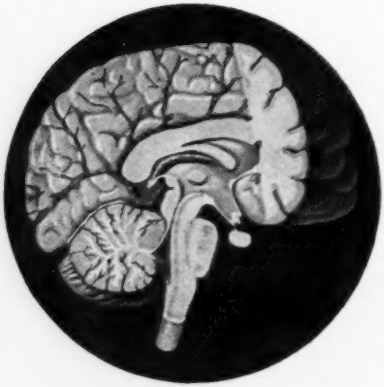
Clinical Medicine

Original Articles for October, 1957



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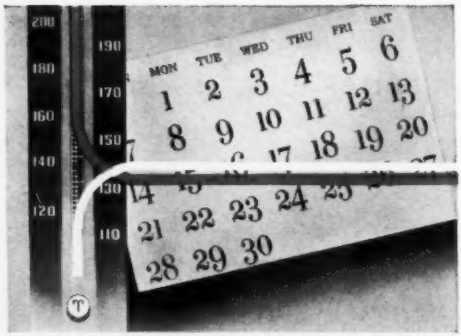
Clinical Medicine

Vol. IV, No. 10

CONTENTS FOR OCTOBER, 1957



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Reference: 1. J. Michigan Soc. 55:154 (Feb.) 1956.

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Clinical Medicine

CLINICAL MEDICINE published monthly by Clinical Medicine Publications, Inc. P. O. Box M, Winnetka, Illinois. Published at 535 S. Sheridan Road, Waukegan, Illinois. Address all communications to P. O. Box M, Winnetka, Illinois. Entered as second class matter April 1, 1954 at the Post Office at Waukegan, Illinois under Act of March 3, 1879.

SUBSCRIPTION PRICES United States and possessions and Canada, $7.50 yearly. Other countries add $1.00 yearly additional charge. Remit by postal money order or draft on United States Bank. Single copy $1.00.

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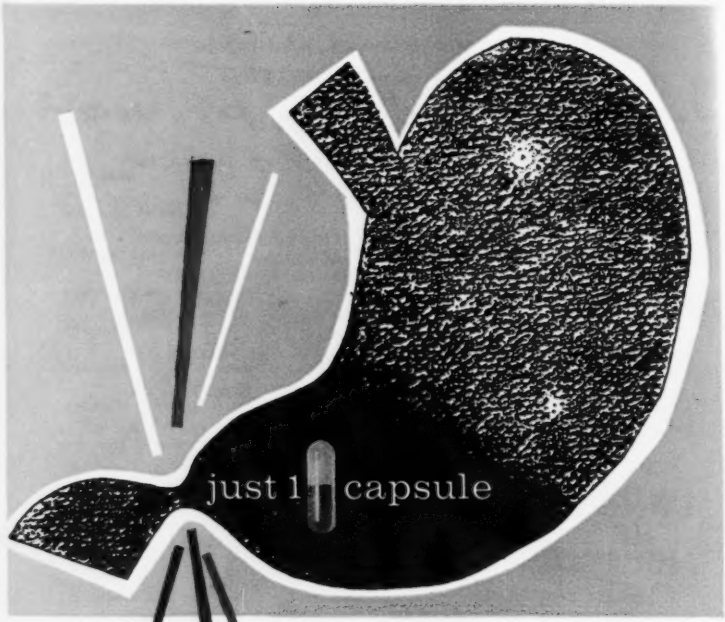

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EDITORIAL

Important Facts About Staphylococcal Infections

These organisms are more prevalent and dangerous than is generally realized; they are insidious and may lie dormant for long periods of time

JAMES M. NORTHINGTON, M.D., *Editor*

The relative insensitivity of staphylococcal infections to antibiotic agents has given them added prominence in recent years. Here free use has been made of an article by a teacher[1] in one of our best medical schools.

HABITAT

Staphylococcus is spread from the nose to the skin and, particularly, to the hands of the carriers, and from there to their clothing and to many other objects. Nurses caring for infants must be meticulously careful in washing their hands. There is no large focus of staphylococcal infections in animals that endangers human beings. This infection in man is spread from person to person and is maintained by the growth of the organism in the nose.

NO IMMUNITY AT BIRTH

Children are not born with any immunity to Staphylococci. One of the most serious diseases of infancy is pneumonia due to these organisms. In 25% of these cases, the illness is preceded by local sepsis such as impetigo or boils. Recent surveys in large hospitals with maternity units have shown that staphylococcal sepsis occurs in 10 to 15% of infants. It often takes the form of deep and superficial skin sepsis and of conjunctivitis.

1. Smith, I. M., *J. Iowa M. Soc.*, 47:359-366,1957.

OSTEOMYELITIS

Although osteomyelitis of older children is well recognized, the possibility that osteitis may occur in newborns is not so well known. Osteomyelitis is a disease of children, most often boys, between five and 15 years of age. It is almost always due to *Staph. aureus,* and very often follows injury to a joint area. The initial investigation of osteomyelitis should include swabs of the nose and examination of the blood for possible septicemia. The remedy of choice is heavy antibiotic treatment, which should include penicillin, but may necessitate another antibiotic if the organism proves resistant to penicillin. Surgical intervention is often necessary.

IMPETIGO

This common disease of school children usually starts near the nose tip and spreads across the face, forming yellow crusts. The majority are infectious with phage type No. 71 Staphylococcus—80% of the cases in three series.

ADULT STAPHYLOCOCCAL INFECTION

The commonest infections in adults are of the skin (boils) by transfer of Staphylococci from nose to skin. Nose treatments are advised for people who have boils.

A staphylococcal infection sometimes found in adults, often along with ulcerative colitis, is pyoderma gangrenosum. The necrotic lesions are circinate, deeply punched-out. The Staphylococcus can be cultured from the usually crusted margin. At the hospital of the State University of Iowa, in the period 1936-1939, there were some 35 cases per year with a mortality of 81%. In the period 1940-1941, i.e., the sulfonamide period, there were some 15 cases per year, with a mortality of 72%. In the period 1945-1949—the early penicillin period—there were some seven cases per year, with a mortality of 63%. The period 1950-1955 has shown an increase in cases to about 25 per year, and the mortality has been 80%. These mortality figures are misleading as a result of the association with other fatal diseases such as leukemia.

Sudden diarrhea, oliguria, high fever, shock and death in patients receiving antibiotics have become increasingly frequent since 1948. Many of these patients have a diarrhea due to the Staphylococcus aureus, the result of the depression of the normal flora of the bowel by broad-spectrum antibiotics. Whenever this is suspected, broad-spectrum antibiotics should be stopped immediately, and one of the new agents, e.g., Albamycin®, to which the organisms have not yet become resistant, or an uncommonly used antibiotic such as bacitracin, is substituted. It is known that not all the cocci are eliminated from the tissues of animals by antibiotic treatment. Staphylococcal abscesses may develop years after the apparant cure of the septicemia.

FATAL STAPHYLOCOCCAL SEPTICEMIA FOLLOWING CORTISONE THERAPY

Recently two fatal cases of staphylococcal septicemia have been reported following the use of cortisone. A woman, 39 years of age, with active rheumatoid arthritis, previously had a staphylococcal abscess. She was treated with 200 mg. of cortisone daily, and she showed great improvement. On the ninth day of the treatment, her temperature rose to 103; 24 hours later she

developed shock, lapsed into coma, and died. At autopsy, the cortical surfaces of both kidneys were covered with small abscesses; death was due to staphylococcal septicemia.

A man, 56 years of age, with a primary exfoliative dermatitis had taken 100 mg. of cortisone daily over a long period. At times he had received ACTH. Early in the second year of this treatment, an abscess developed over the right elbow; a week later severe precordial pain, dyspnea and auricular fibrillation. Within a week he became semiconscious, and died. Pus was found in the meninges, in the pericardium, in the myocardium, and there were several small abscesses in both kidneys. Death was due to staphylococcal septicemia.

VIRULENT STAPHYLOCOCCI IN HOSPITALS

Many patients acquire virulent staphylococci while hospitalized, usually at a time when their resistance has been lowered by disease or therapy. Security from secondary infection cannot be bought with antibiotics; *it can be obtained only by vigorous attention to asepsis in all of our minor and major interruptions of the body's natural defenses.*

PREVENTIVE MEASURES

We must identify dangerous carriers in our environment and treat them vigorously. This can not be done without adding to the number of antibiotic-resistant Staphylococci. Small outbreaks, however, can be studied, and the responsible carrier can be found and treated. In a hospital, all patients having staphylococcal sepsis should be strictly isolated.

In serious staphylococcal infection, penicillin can be a starting point for treatment. Some use streptomycin with penicillin, and this combined therapy may delay the onset of resistance, although it is probable that a sensitive strain does not become resistant during treatment. Quite commonly, hospital patients exchange their own sensitive strain for the resistant strain being carried by members of the staff.

In major infections, the organism should always be tested in the laboratory for *in vitro* sensitivities, and the drug of choice thus indicated should be used. Direct titration of the isolated organism against the patient's serum during treatment has a lot to commend it. In general, bactericidal drugs, such as penicillin or bacitracin, are preferable to bacteriostatic drugs, such as the tetracyclines. The temperature often falls and the temptation to change the regimen is great. Sound judgment is needed. Some use erythromycin (to which 29% of Staphylococci isolated in this hospital are resistant); others Chloromycetin (to which 4% of our Staphylococci are resistant).

SURGICAL TREATMENT

It is difficult to control pus infections with antibiotics. Surgical procedures are required in many cases. Foreign bodies in a wound cripple the body's natural defenses. When staphylococcal septicemia continues despite antibiotic treatment, look for a septic focus. In some cases, kidney abscesses can be drained with great benefit.

Antiserum toxoid and bacteriophage have not been clearly shown to be beneficial, but they require much more study. Therapy with autogenous vaccines has produced good results in some hands.

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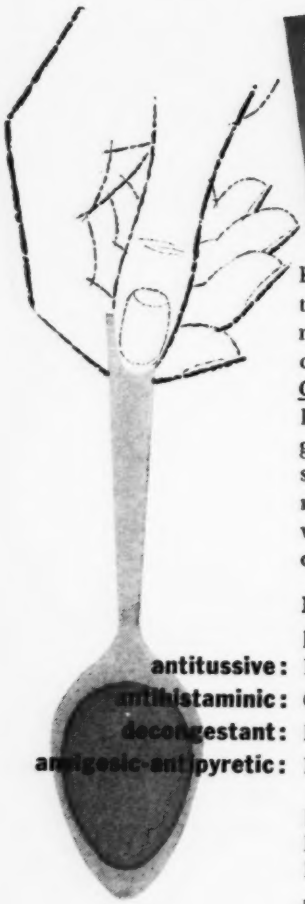

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ORIGINAL ARTICLE

C ıronic Ulcerative Colitis

Differential diagnosis, recommended treatments, and the surgical indications of the fulminating toxic, recurrent and continuous forms of idiopathic ulcerative colitis

WILLIAM S. CARPENTER, M.D., F.A.C.S.* and
PAUL J. CONNOLLY, M.D., F.A.C.S.,* *Detroit, Michigan*

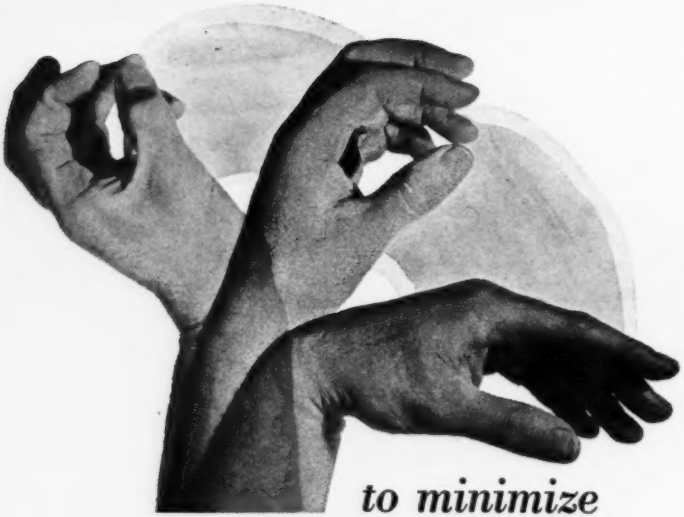
Of the many patients who visit a physician each year with the complaint of diarrhea, most of them can be handled satisfactorily by the usual medical measures. Not being a common disease, the diagnosis of those who actually have idiopathic ulcerative colitis, and selection of the few in which surgery is advisable, calls for detailed study and careful judgment.

From a pathological standpoint, the disease may be divided into two major groups. In the diffuse type (95% of cases), the ulcerations first appear in the rectum and later spread proximally to involve most of the colon. In segmental or "right-side colitis" (5% of cases), the disease begins in some portion of the colon proximal to the rectum. It may later spread to involve other areas of the colon and even ileum, but does not involve the rectum. Primary consideration will be given to the more common diffuse type of disease.

*Surgical Depts., Harper Hospital and Mount Carmel Mercy Hospital.

DIAGNOSIS

The possibility of chronic ulcerative colitis should be considered in any case of chronic diarrhea which does not respond readily to the usual measures, especially if there is pas-



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sage of blood or pus. If the condition is recurrent, with fever, anemia and loss of weight, the diagnosis of ulcerative colitis should be even more seriously considered. Laboratory studies of stool specimens will be necessary to determine the specific causes of diarrhea.

The most important diagnostic procedure is the sigmoidoscopic examination. Bargen has stated that 95% of cases can be so diagnosed.[1] In the presence of active disease, and occasionally when the process is asymptomatic, the diffusely reddened and friable mucosa is characteristic. Many tiny ulcerated bleeding areas are seen when the mucosa is wiped with cotton. The mucosa may appear finely granular. In the late stages of the disease, pseudopolyps and rigidity of the colon wall may be encountered. The uncommon segmental type of ulcerative colitis, in which the rectum is not involved, may show no sigmoidoscopic findings. A negative sigmoidoscopic examination is not sufficient evidence to rule out ulcerative colitis.

The other important diagnostic method is the barium enema examination. Here the findings will vary from the scattered minute serrations[2] seen best in profile in the sigmoid colon of the early case, to the rigid, shortened "lead pipe" colon and pseudopolyps seen in advanced disease. The use of the air-contrast enema may be necessary to show these changes. In many cases, x-ray examination will substantiate the diagnosis and show the extent of involvement of the colon. In the segmental type, it is the only method by which the diagnosis can be established.

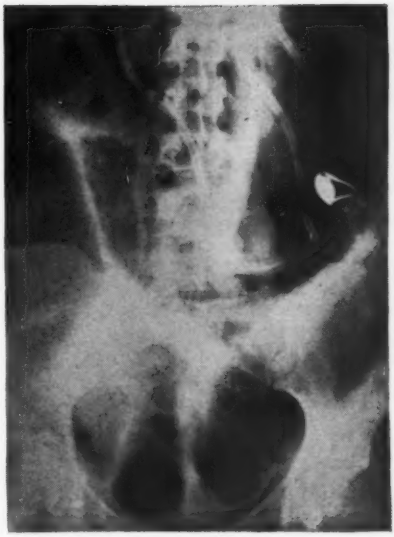

FIGURE 1

In the fulminating toxic form of the disease, the use of the barium enema is not advisable because of the possibility of perforation. However, a flat plate of the abdomen will occasionally show marked dilatation of the colon which is considered to be a sign of deep penetration into the wall of the bowel. (Fig. 1) Obstruction need not be present to produce such dilatation.

The x-ray findings do not necessarily reflect the duration of the disease. The disease may have lasted for many years, yet x-ray findings are minimal. Advanced pseudopolyps may also appear within a few months of the onset of the disease. Figures 2 and 3 show the changes which occurred within a period of six months in a boy, eight years old.

1. Bargen, J. A., Chronic Ulcerative Colitis, C. C. Thomas, 1951.
2. Kalil, T. H. & Robins, L. L., *Radiology*, 53:1-10, 1949.

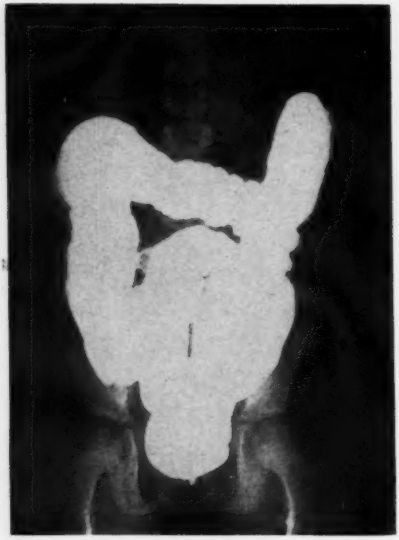

FIGURE 2

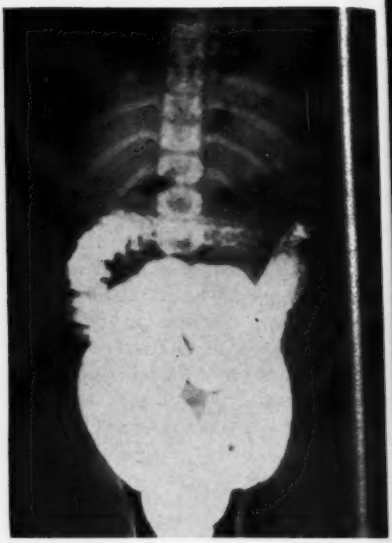

FIGURE 3

TREATMENT

For the most part, the treatment of ulcerative colitis is medical. Diet, modifications, antibiotics, and steroids have all been shown to be helpful. However, 25 to 30% of patients suffering from true ulcerative colitis will eventually need surgery.[3,4,5,6] Its delay may allow the patient to become so cathectic that the operative risk is greatly increased. Operation will be tolerated well if done before the general condition has deteriorated. Surgical indications include intractability, manifested as fulminating toxic disease, recurrent, continuous disease.

FULMINATING TOXIC DISEASE

About 5% of all ulcerative colitis patients are those who are critically ill: fever over 102° for several days, rapid pulse, abdominal cramps, diarrhea, and often abdominal distention and tenderness are the usual signs. There is a high mortality in the original attack or subsequent attacks if the colon is not removed. In Crile's series of 31 such patients, 36% died on first admission and another 32% died of complications of the disease in two to nine years.[7] Once such a fulminating attack occurs, there is a strong probability of need for removal of the colon, preferably during a remission, a fortunate development for both patient and surgeon. In some instances, a remission does not occur, and surgery must be resorted to or the patient will die, even in the first fulminating attack.

The best time to operate in such a fulminating disease is when there is no longer reasonable hope of a

3. Lahey, F., *Ann. Surg.*, 133:5,1951.
4. Patterson, H., *New York S. J. Med.*, 51:2135-2139,1951.
5. Colcock, B., *New England J. Med.*, 242:320,1950.
6. Wheelock, F. C. & Warren, R., *New Eng. J. of Med.*, 252(11)421-5,1955.
7. Crile, G. & Thomas, C. Y., *Gastroenterology*, 19: 58-67,1951.

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references (1) Johnson, H. J., Jr.: To be published. (2) Settel, E.: Am. Pract. & Digest Treat. 8:443 (March) 1957. (3) New and Nonofficial Remedies, J.A.M.A. 162:205-207 (Sept. 15) 1956.

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remission, and before the patient is moribund. Probably a two to four week trial of medical treatment should be sufficient.[8]

The use of cortisone in a fulminating case, for a ten to fourteen day period, in an effort to induce a remission is well worthwhile. The use of cortisone for long periods should be on a medical basis and, once embarked upon should be continued as long as necessary. Treating patients for long periods with cortisone, then operating when cortisone has failed, has led to serious difficulties in the postoperative period.[9,10]

RECURRENT DISEASE

This is one of the common forms of intractability representing the exacerbations and remissions characteristic of idiopathic ulcerative colitis. The exacerbations may be mild, only causing a patient to miss work or school, or actual fulminating attacks. The interval between attacks may be weeks or years. Usually typical abdominal cramps and diarrhea occur with loss of weight during an attack. During a remission, the patient feels quite well and regains his weight. When recurrences are severe and frequent enough to disable the patient physically, economically, or socially, surgery should be considered.

CONTINUOUS DISEASE

Continuously active ulcerative colitis, is as common an indication for operations as is recurrent disease. Such a patient is ill continuously for many months or years, and remains anemic and underweight. He may be able to hold a job or go to school, but must avoid any additional activity. He must keep within easy reach of a bathroom. Wheelock and Warren[6] believe that three years of medical treatment is sufficient.

In the continuous as well as the recurrent disease, the decision as to surgery must be made primarily by the patient. If possible, he should visit patients who have been operated on—without his physician being present. In several of the large cities, including Detroit, post-colectomy patients have formed an "Ileostomy Club," for the exchange of ideas and to provide an opportunity for such visits.

OTHER INFLUENCING FACTORS

Massive hemorrhage occurs in less than 1% of cases; if it cannot be controlled otherwise, operation must be done. The same is true of perforation. The use of steroids may increase the incidence of perforation.[11] Obstruction of the colon may necessitate operation. Arthritis and spreading skin ulcerations secondary to ulcerative colitis are uncommon, but may occur and require removal of the colon. Either may resist all conservative measures and subside quickly after colectomy.

ASSOCIATION OF CARCINOMA

In recent years, several large series have shown that a patient who has had active ulcerative colitis for over ten years has a 15-30% chance of developing carcinoma of the colon.[10,12,13] This is especially apt to occur in patients in whom the onset of the disease was prior to 15 years of age. Carcinoma may occur in patients in whom the disease is active

8. Ripstein, C. B., *J. A. M. A.*, 152:1093-1095,1953.
9. Findlay, C. W. & Howes, E. L., *New England J. Med.*, 246:597-604,1952.
10. Grimes, O. F., et al., *Am. J. Surg.*, 90:228-237, 1955.
11. Tulin, M., et al., *J.A.M.A.*, 150:559-62,1952.
12. Surer, W. J. & Bargen, J. A., *J.A.M.A.*, 141: 982,1949.
13. Lyons, A. S. & Garlock, J. H., *Gastroenterology*, 18:170-177,1951.

but not disabling enough to warrant surgery. It would seem that the chronic ulcerative colitis of many years' duration must be considered as are other potentially cancerous lesions and treated accordingly. Observation of such cases is hardly effective because the early diagnosis of carcinoma in a patient with ulcerative colitis symptoms is difficult. Operation after the diagnosis has been made has yielded few five-year cures.[13] The malignant tumor grows rapidly, and is frequently multiple. It occurred in 12 of 41 patients in one series.[12]

OPERATIVE PROCEDURE

In the segmental type of ulcerative colitis, the rectum will be uninvolved. Resection of the colon with anastomosis of the ileum to the rectum just above the pelvic floor is the operation of choice. In the case of the fulminating toxic patient, colectomy to the low sigmoid with permanent ileostomy in one stage, followed by excision of the rectum in two to six months is recommended. The use of ileostomy alone in such cases has led to a high mortality and a low cure rate. Ten of 16 patients with fulminating disease treated by ileostomy alone were dead of ulcerative colitis in two to nine years.[7] Crile and Ripstein[8] have shown that the mortality of colectomy in such fulminating cases is much lower (14%) than ileostomy (60%). The patients on whom ileostomy alone is performed die because of the continued presence of the diseased pus- and detritus-filled colon. Miller and Gardner cite a patient who continued to lose 300 gm. of protein in the stool after ileostomy.[14]

ELECTIVE OPERATION

For patients with diffuse disease where the operation is elective, the choice is removal of the colon and rectum in one or more stages. Ileostomy as a definitive treatment for ulcerative colitis has proven unreliable. In addition to failure to control the disease, many cases have been reported in which carcinoma developed in a colon defunctionalized by ileostomy.[6,15] Our preference is the one-stage procto-colectomy. The operation can be done with no higher mortality than a colectomy. The saving in hospital days is a great advantage; more important is the fact that these patients, many of whom have been ill for months and years, are spared the mental trauma of repeated operations. We have had patients leave the hospital as early as the fourteenth day after excision of entire colon and rectum.

REHABILITATION

The ileostomy incident to the colectomy has caused many physicians to delay advising operation and many patients to delay accepting this advice. Up until a few years ago, the constant malodorous discharge, the skin irritation and even ulceration about the stoma, and frequent obstruction or prolapse of the ileostomy made life miserable for the ileostomy patient. Improved technics and better ileostomy bags now enable the ileostomy patient to carry on all varieties of work, sports and social activities. When faced with the choice of disabling ulcerative colitis or ileostomy, none would want the diseased colon returned.

14. Gardner, C. & Miller, G., *Arch. Surg.*, 63:3,370-72,1951.

15. Crohn, B. B. & Yarnis, H., *New York State J. Med.*, 51:2129-2135,1951.

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ORIGINAL ARTICLE

Opiateless Preoperative Sedation

This non-barbiturate hypnotic was evaluated on the basis of operating room induction and anesthesia requirements, and ease of postoperative handling

KENNETH M. LOGAN, M.D., *Pittsburgh, Pennsylvania*

If the use of opiates could be eliminated from the routine preoperative medication it was felt that there might be less tendency toward the development of respiratory depression, and less effect on the intestinal tract, and perhaps less postoperative "gas pains." Glutethimide*, one of the new non-barbiturate hypnotics, was selected for trial because, unlike the barbiturates, it has little, if any, depressant effect on either respiration or the cardiovascular system.[1] Since the drug had been found to be a satisfactory hypnotic for routine office practice,[2,3,4] it was decided to undertake a study using it preoperatively.

METHODS

Each of a small group of patients was given 1.0 Gm. of Doriden one and one-half hours preoperatively and an additional 0.5 Gm. one-half hour before being brought to the operating room. This schedule provided insufficient rest the night before and some of the patients remained wide awake and quite apprehensive. This resulted in an increased length of induction time in a few cases.

Following this trial, a conference was held with the Anesthetists and

*Doriden®, Ciba, Summit, New Jersey.

1. Gross, F., et al., *Schweiz. med. Wchnschr.*, 85: 305-309, 1955.
2. Matlin, E., *M. Times*, Jan., 1956.
3. Weston, D. T., *Journal-Lancet*, 76:1,1956.
4. Lane, R. A., *New York State J. Med.*, 55:2343-2344,1955.

the following dosage schedule was instituted. At bedtime the night before surgery, 1.0 Gm. of the drug was given. Most of the patients were found to be sleeping soundly an hour later, the others drowsy and resting quietly. In only two instances was it necessary to give an additional 0.5 Gm. of the drug to produce sleep. The immediate preoperative routine consisted of the administration of 1 Gm. one and one-half hours before operating room call. Atropine sulfate gr. 1/150 intramuscularly and 0.5 Gm. of the hypnotic by mouth were given one-half hour before call to the operating room.

The effects were evaluated at three different periods:

1. Upon arrival in the operating room.
2. During induction of anesthesia.
3. Postoperatively. The status upon arrival was recorded as follows: asleep, drowsy, awake but relaxed (fears controlled), or frightened and carrying on in an obstreperous manner. During induction of anesthesia, the following points were ascertained: induction time; classification of the induction as to whether it was smooth, resistant or difficult; and classification of anesthetic requirements as to less than generally required, usual, or more than usually required. Under the heading of postoperative condition, the patients were judged as to whether or not they were easier to handle, about as usual, or more difficult. The duration of postoperative drowsiness was recorded as well as the complications.

SELECTION OF PATIENTS

There were 60 patients all chosen from private practice. They ranged in age from six to 73 years. With the exception of three children, all were in the adult group. The three children were given smaller doses. Two children (ages 6 and 11) received only 0.25 Gm. of the hypnotic plus atropine one hour before operating, the third who was big for his age of 10 was given 0.25 Gm. at bedtime. The same dose was repeated one and one-half hours preoperatively and one-half hour preoperatively.

The operations varied from minor procedures such as dilations and curettages, polypectomies, wart removals and hemorrhoidectomies, to exploratory laporotomies, appendectomies, partial and total hysterectomies, and hernia repairs.

The anesthesia except for a few spinals consisted of intravenous barbiturates, sometimes supplemented by nitrous oxide and/or ether.

RESULTS

The results as evaluated under the categories listed may be found in Tables 1 through 4. Of the patients in the trial, 95 per cent arrived in the operating room in a satisfactory state. Three of the 60 cases (5%), could be classed as frightened and not having satisfactory preoperative sedation.

The induction of anesthesia was smooth and without difficulty in 88.3 per cent of the patients, 53.3 per cent requiring less and 36.7 per cent the usual amount of anesthetic. Induction time ranged from two to 15 minutes, averaging 6.2 minutes. The period from insertion of the needle for the administration of pentothal until the operation could be started is induction time. Omitting those patients who were resistant changes this calculation to 5.3 minutes. There was no instance of operative or postoperative respiratory or circulatory depression.

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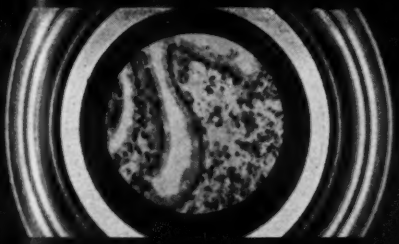

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TABLE 1

ON ARRIVAL AT OPERATING ROOM

	NO. CASES	%
Asleep	24	40.0
Drowsy	24	40.0
Relaxed	9	15.0
Frightened	3	5.0
Total	60	100.0

TABLE 2

ANESTHESIA INDUCTION

	NO. CASES	%
Smooth	53	88.3
Resistant	6	10.0
Difficult	1	1.7
Total	60	100.0

TABLE 3

ANESTHESIA REQUIREMENT

	NO. CASES	%
Less	32	53.3
Usual	22	36.7
More	6	10.0
Total	60	100.0

TABLE 4

COMPARISON OF POST-OPERATIVE CONDITION

	NO. CASES	%
Easier	47	78.3
Usual	9	15.0
Difficult	4	6.7
Total	60	100.0

The postoperative condition was satisfactory in 93.3 per cent, and 78.3 per cent could be handled more easily than usual and could be returned to their rooms in a shorter time than usual and were less confused upon coming out of anesthesia. Postoperative drowsiness varied from the extremes of one-half hour to 36 hours with an average duration of 8.6 hours, lasting, however, 8 hours or less in 37 patients. Postoperative complications were minimal and are discussed later. All of the children were well sedated upon arrival at the operating room and anesthesia was easily induced. Two required less than the usual amount of anesthesia. In addition, they were easier to handle postoperatively.

DISCUSSION

Satisfactory preoperative sedation is important to the patient and to the anesthesiologist. Being badly frightened is certainly not a pleasant experience. Anesthesia is much more easily induced in the quiet calm patient, and the lessened anesthetic requirement facilitates rapid recovery. That preoperative sedation and induction of anesthesia is more than satisfactory can be seen from Tables 1 and 2. Even without the use of opiates, Table 3 shows that less than the usual amount of anesthetic was required in 53.3 per cent of cases. A particular advantage of this non-barbiturate, non-opiate routine is that there is no danger of giving two barbiturates together, and hence, there is less risk of respiratory depression. The value of not using opiates is even more evident when the postoperative status is considered.

In 78.3 per cent of the cases recovery from anesthesia was smoother. There were no problems of coughing and struggling. Most patients were returned to their own rooms in a much shorter interval than had been the case with previously used seda-

tives. Postoperative complications were minimal. Three of the 60 patients had urinary retention relieved by one or two catheterizations. Only five patients had postoperative abdominal distention. The very low incidence of this common problem is extremely gratifying and seems to be attributable to the omission of preoperative narcotics and low postoperative requirements. The latter were greatly reduced with the patients needing at most only one or two hypos during the first 24-hour postoperative period. During the course of this study one patient had to undergo surgical intervention a second time and insisted that an identical routine be used. The oldest patient, aged 73, who one year previously had had a myocardial infarction underwent an extensive exploratory laporotomy for cancer with no difficulties.

SUMMARY

An opiateless preoperative sedative routine using a non-barbiturate hypnotic, Doriden, plus atropine in 60 patients was found to be very satisfactory. The results were based on an evaluation of the patient's condition upon arrival in the operating room, induction and anesthesia requirement, and ease of postoperative handling. The preoperative routine was as follows: Doriden, 1.0 Gm. at bedtime; 1.0 Gm. one and one-half hours before and 0.5 Gm. one-half hour before call to operating room, and atropine 1/150 intramuscularly at the time of the last dose. Postoperative complications were minimal, and there was no respiratory depression. A particular advantage to the patient was the freedom from postoperative gaseous distention.

ORIGINAL ARTICLE

The Treatment of Bronchial Asthma

This disease is more than a lung problem; it involves the entire organism and some psychotherapy should supplement the symptomatic treatment

ALVIN SELTZER, M.D.,* *Washington, D. C.*

Bronchial asthma results from the triad of bronchospasm, mucosal edema, and inspissated secretions, caused by some irritation of the respiratory system. Effective treatment covers a wide range: pharmaceutic, endocrine, antibiotic, psychologic, physiotherapeutic and allergic. The treatment of bronchial asthma may be classified into several broad categories: Preventive, specific, and symptomatic treatment.

PREVENTIVE TREATMENT

Since asthma is often hereditary and often follows other allergic diseases such as eczema, hayfever and rhinitis, preventive measures should be particularly aimed at allergic families and allergic individuals *before* they show symptoms. The keynote of prevention is the *avoidance of excessive exposure to antigenic materials.* This should start in prenatal life. The mother should avoid excesses of antigenic foods—chocolate, eggs, nuts, fish, pork, etc. and should continue into infancy with careful observation for possible allergic reactions to milk, eggs and fruits, etc. The potentially allergic person should avoid excessive exposure to dust, feathers, pets, strong fumes, and large amounts of tree, grass, or weed pollens during the pollen season. Infections and colds should be actively treated, and oc-

*George Washington University School of Medicine.

cupations such as florist, upholsterer, baker, furrier, farmer, and painter should be avoided. Finally, since untreated hayfever and allergic rhinitis may develop into asthma, active treatment of mild allergies in this group should be advised.

SPECIFIC TREATMENT

There are only two measures which are specific in the treatment of bronchial asthma:

1. The avoidance of the causative agent, and
2. Desensitization against the specific causative agents.

In many cases no specific agents can be identified, but the patient should have a careful study for them early in the disease. This phase of study is covered in any good allergy text.

SYMPTOMATIC TREATMENT

One should have a plan of treatment that is simple, rational, and proven. There is a place for complicated treatment and newer drugs, but not as the first choice in the treatment routine. The *emergency treatment* of asthma should have as the cornerstones of treatment: the proper use of epinephrine, intravenous aminophyllin, and adequate hydration. The acute attack relieved, an oral ephedrine preparation should be given for a few days to prevent recurrence of the acute symptoms.

The long-term symptomatic treatment depends mainly upon bronchodilators and mucus liquefiers, plus careful attention to respiratory infections. The mainstays are ephedrine mixtures such at Tedral, Luasmin, etc. (ephedrine, aminophyllin and phenobarbital), and potassium iodide in saturation doses. A minimum of contact with infected individuals, proper rest, and prompt treatment of respiratory infections, including if necessary, a short course of antibiotics.

HYDRATION AND NUTRITION

The sick asthmatic should have at least one glass of hot, sweetened liquid such as tea, every waking hour, or intravenous fluids may be used. Food should be given in small, frequent feedings. Carbohydrates are usually more acceptable during the acute attack.

OXYGEN THERAPY

Oxygen therapy is very often a waste, and occasionally can be a source of danger — particularly in long standing emphysema with a disturbance of the CO_2 combining power of the blood. Many times, oxygen is used as a psychological lift. Cyanosis and long-standing anoxia are indications for therapy. Utilizing the oxygen tank as a means of giving aerosol treatment often proves beneficial.

AEROSOL THERAPY

This can be a very useful form of treatment. There are several methods: the hand nebulizer, the oxygen tank operating through a nebulizer, and the positive-negative pressure nebulizer. The nebulizer must give a small-particle aerosol, and the patient should be carefully instructed in its use. The DeVilbiss #40 nebulizer is a good one, and it is reasonably priced. The materials used include epinephrine solution, Isuprel solution, Neosynephrine solution, Alevair solution, etc. These can be used singly or in combination.

SYNTHETIC SYMPATHOMIMETIC DRUGS

These are often of help to the asthmatic who has become resistant

to ephedrine or to the patient who is unduly stimulated by ephedrine. Two good examples are oral Isuprel and Orthoxine.

ANTIBIOTIC THERAPY

Many cases of status asthmaticus are caused by unrecognized respiratory infections, and the use of antibiotics in these cases is sometimes life-saving. The long-continued use of penicillin by injection or via aerosol should be avoided in order to escape the huge percentage of allergic reactions in these cases.

VACCINE THERAPY

The question of autogenous versus stock vaccine is often raised. All vaccine therapy is mainly based on the non-specific protein effect, therefore beneficial action can result from stock as often as from autogenous vaccines. This therapy is only for cases in which the infectious elements seem to be the trigger for asthma.

OTHER DRUGS

Aminophyllin used intravenously is effective in an acute attack, and the occasional use of aminophyllin suppositories is helpful. Aminophyllin by mouth has not proved very effective.

The use of antihistamines alone, with few exceptions, has no place in the treatment of asthma. Their main action is a drying and thickening of the secretions. For sedative effect, *after* other stimulating drugs, they have some merit. Phenergan, by injection, in a case of status asthmaticus which has become "adrenalin-fast," will sometimes restore the responsiveness to epinephrine.

Sedation is a double-edged sword in bronchial asthma. The proper sedation will often help the tense asthmatic who has been stimulated by the various drugs, while the excessive use of sedatives in the very sick patient may kill him.

The possible dangers of respiratory depression from the narcotics, allergic reactions, and drug addiction, must be kept in mind. Demerol has less respiratory depressive effect than other commonly used narcotics.

There are two situations where ACTH and cortisone compounds are of value:

1. Severe status asthmaticus where the usual good medical care has not produced a remission. In these cases, a short course of ACTH by slow intravenous drip, or the use of the newer meticortones by mouth for several days can be life-saving.

2. Chronic asthma and emphysema in which the patients are not made comfortable by other medical care. A small amount of meticortone added to the other drugs will often aid in making the status bearable. These drugs should be used only in definite situations and only in conjunction with other good asthmatic care.

The proper place of the tranquilizers in the treatment of bronchial asthma is as a mild sedative, used in conjunction with the other drugs.

Any physician who is successful in the treatment of a severe asthmatic, is using a certain amount of psychotherapy. The assurance, confidence and interest of the good physician is transmitted to the sick patient. Long-standing or severe psychic stress can be a factor in producing either status asthmaticus or chronic intractable asthma, and while there are a certain number of patients who could be aided by in-

tensive psychotherapy, the average patient is well managed by the understanding physician.

The essentials of physiotherapy are a series of exercises that attempt to correct defective breathing habits, stressing the expiratory phase of respiration and the proper use of diaphragmatic breathing. I have never been able to convince myself as to whether any benefit derived was from physio- or psycho- therapy.

Climate change as a factor in the treatment of severe asthma is a subject about which there is much misunderstanding. Our "allergy-free" climates have many asthma specialists busy with the patients we have sent. It is true that frequent barometric changes, high humidity, high concentration of pollens and molds, industrial fumes, etc., are apt to cause asthmatic symptoms. But sending a patient far away, ignorant of what he is to avoid, making him give up financial and social connections, in order to seek health and happiness in a strange area, more often merely adds to his problems. It is important that a careful evaluation of the problem precede any recommendation to change climate.

Now, to list some procedures used in the past, and occasionally recommended at the present, of limited if any value: Surgical procedures on the nerve plexuses of the lung, x-ray treatments to the chest, arsenic, diamox, oxygen-helium therapy, fever therapy, ether-in-oil enemas, khellin, etc.

The person who has asthma must be treated as an individual. Therapy must fit the problem and the asthmatic must not be fitted into a fixed plan of treatment. Be understanding, be observing and be versatile in the management of this complex problem, which we call bronchial asthma.

ORIGINAL ARTICLE

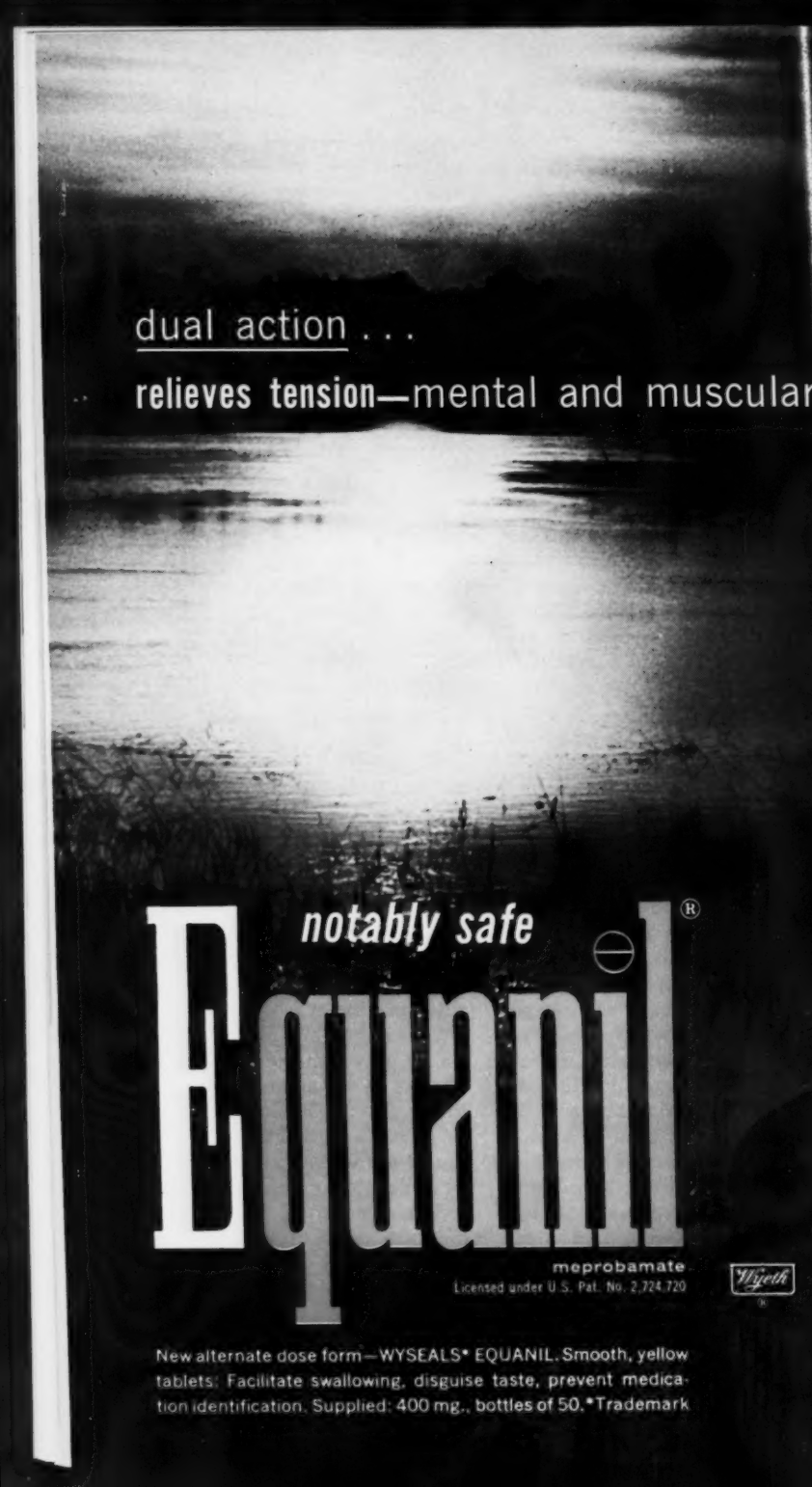
Chemotherapeutic Management of Bacteriuria

The presence of bacteria in the urine can readily be demonstrated, but identifying the organism or organisms responsible is more difficult

VERNON D. STANDISH, M.D., *Big Timber, Montana*

An oily cloudiness that remains in urine after passage through coarse filter paper, or after a few minutes centrifuging at moderate speed, is due to bacteria. An attempt to identify the bacteria should be made, so specific measures may be employed against the organism as soon as possible. To do this, spin the specimen at moderate speed for a few minutes to settle the casts, the white blood cells and the debris. Transfer the cloudy supernatant fluid to another tube and continue centrifuging at highest speed for 15 or 20 minutes. The sediment then consists of bacteria which can be examined directly on a slide after suitable staining. Commonly found organisms include E. coli, staphylococci, streptococci, neisseriae and the tubercle bacillus. Usually it is not possible to positively identify the bacteria by this means alone, and only culture, an aid which is not usually readily available to the rural practitioner, can answer this question.

However, it is not always essential to know the identity of the organism or organisms present. Treatment should be instituted with a triple-sulfa combination or one of the single soluble sulfonamides such as Gantrisin or Thiosulfil. These are chosen for initial therapy because they are apt to control the condition promptly, and because they represent moderate rather than extreme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expense to the patient. If material benefit is not noted within 48 to 72 hours, the therapy should be broadened to include chloramphenicol or one of the tetracyclines. Over 50% of patients will be well by this time. For them, considerable time and expense will have been saved. For the remainder, it may be necessary to have a urine culture by some distant laboratory. Send the specimen by mail, using the container provided by the laboratory. An antibiotic or chemical attack, based upon the laboratory report, can be planned when the report becomes available. Adequate drainage is essential for the control of infection, and the urethra should be dilated if drainage is poor. Resection of the prostate, where it is contributing to the difficulty, must usually await control of the infection.

Bleeding From the Upper Gastrointestinal Tract

Massive upper gastrointestinal hemorrhage continues to be a serious problem, with a high mortality, in spite of an aggressive approach to diagnosis and therapy by the combined medical, surgical and x-ray team. Management of the patient under 60 years of age with uncomplicated peptic ulcer that bleeds presents few problems; management of the elderly patient with bleeding ulcer is far from satisfactory. Advanced age and liver disease were the most serious complications with gastrointestinal hemorrhage. Bleeding from causes other than ulcer had the highest mortality, and comprised the most serious diagnostic problem.

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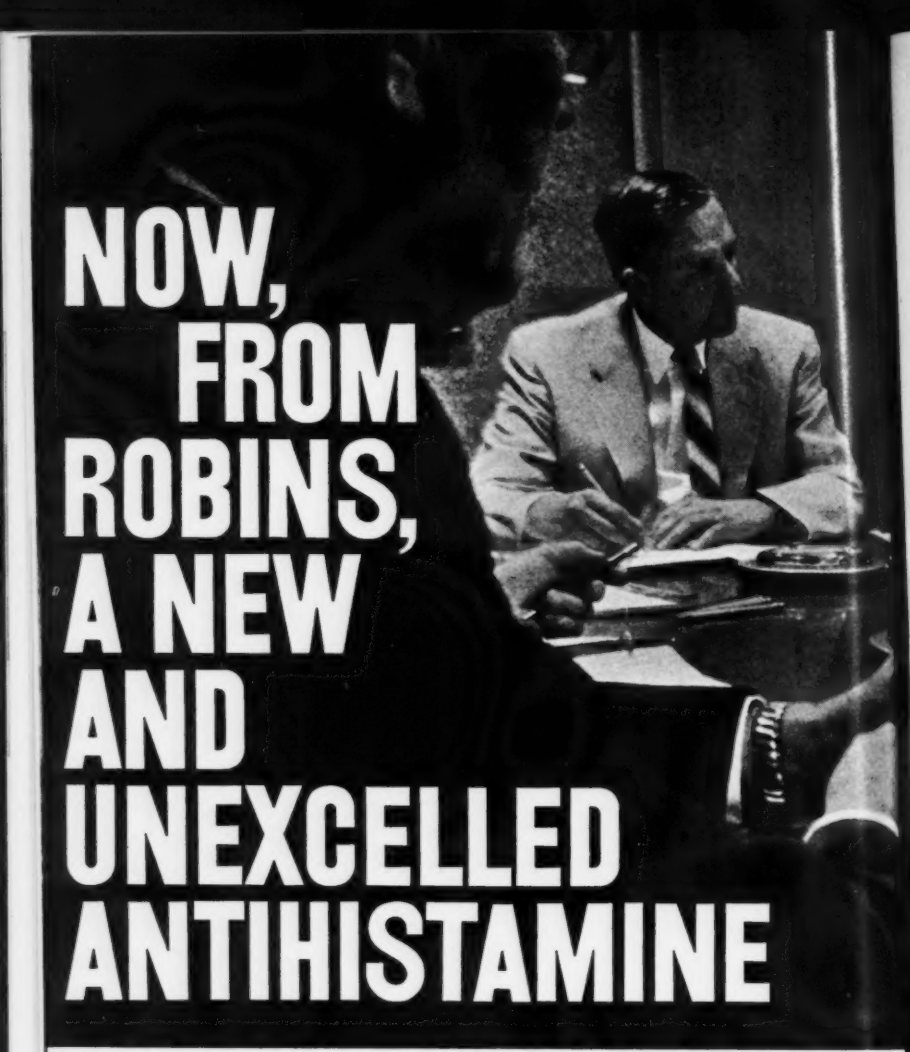

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Diagnosis	No. of Patients	Response				Side Effec
		Excellent	Good	Fair	Negative	
Allergic rhinitis and vasomotor rhinitis	30	14	9	5	2	Slight Dro
Urticaria and angioneurotic edema	3	1	1	1		Dizzy (1)
Allergic dermatitis	2		1	1		Slight Dro
Bronchial asthma	1		1			
Pruritus	1		1			
Total	37	15	13	7	2	Drowsiness Dizzy (1)

From the preliminary Dimetane Extentabs studies of three investigators. Further clinical investigations will be reported as

ORIGINAL ARTICLE

Pacatal in Office Practice

An evaluation of a new phenothiazine derivative in a series of 50 out-patients suffering from varying degrees of emotional disturbances

M. J. FLIPSE, M.D., F.A.C.P., F.A.C.C.P., *Miami, Florida*

Feldman[1] says "Patients who respond moderately to one ataractic drug may respond maximally to another." In treating private office patients, the clinician's decision to use a particular drug will be influenced by the incidence of undesirable side effects accompanying its administration. Drugs which exert a useful therapeutic action without interfering with the patient's normal daily activity are especially suitable for the ambulatory patient. A new phenothiazine derivative* appears to possess this quality. This report deals with an evaluation of Pacatal in a series of 50 patients, all of whom were treated on an out-patient basis. Duration of therapy varied from a few weeks to ten months.

STUDIES BY OTHER INVESTIGATORS

In a comparative study of ataractic drugs, Bowes[2] mentions the ability of Pacatal to favorably influence psychotics without "flattening" them by over-sedation. Volunteers in his study likewise reported that Pacatal did not produce drowsiness or a feeling of heaviness. Hutchinson[3] evaluated Pacatal in a series of 90

*Pacatal®, Warner-Chilcott Laboratories' brand of mepazine.

1. Feldman, P. E., *Am. J. Psychiat.*, 113:589-594, 1957.
2. Bowes, H. A., *Am. J. Psychiat.*, 113:530-539, 1956.
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Sarah Bernhardt as Hamlet

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(1) Welsh, A. L., and Ede, M.: Hydrocortisone Ointments: Their Rational Use in Dermatology, Ohio State M. J. 50:837
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1957. (3) Abrams, B. P., and Shaw
Atopic Dermatitis Treated with Tar-S
(Tarcortin) Cream—A Case Report.
Med. 3:839 (Sept.) 1956.

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hospitalized chronic mental patients. Fifty of these were chronic schizophrenics who had previously been treated with chlorpromazine. Of these 50 patients, 84% showed an additional improvement following therapy with Pacatal. A significant increase in the emotional warmth and responsiveness of the patients was observed. Friedgood[4] found it to be of benefit in treating a series of 145 patients suffering from psychoneurotic-somatic diseases, and in the management of withdrawal symptoms in drug addiction. Davies[5] reported on its use in 352 surgical and 44 obstetrical patients in which good pre- and post-operative conditions were achieved, and tranquilization was more evident than hypnosis.

CLINICAL MATERIAL

The drug was evaluated in a series of 50 private out-patients who fit into the following four categories: emotional tension, anxiety neuroses, senile arteriosclerosis, and schizophrenic reaction. Some patients had been discharged from a mental institution and were being treated for organic diseases and/or emotional disturbances. When necessary, patients were urged to seek psychiatric guidance.

METHOD OF TREATMENT

An initial dosage of 25 mg., three to four times daily, was employed and then adjusted according to response. Dosage ranged from 12.5 to 200 mg. daily. For senile patients, total daily doses of 12.5 to 75 mg. proved to be most effective. In instances where sedation was required, other therapeutic agents were used along with Pacatal.

NO EVIDENCE OF BLOOD DYSCRASIAS

Since all phenothiazine derivatives are capable of producing blood dyscrasias, patients and members of their families were advised to report immediately any occurrence of fever, sore throat or any lesion of the mucous membranes and to discontinue the drug. Blood studies were done on selected patients. No evidence of blood dyscrasias or other toxic manifestations appeared in any of these patients.

RESULTS

The majority of patients receiving the drug exhibited improved affect, and integrated better with their families and in social life. They were more responsive to suggestions made by their physician. Due to the marked adjustments made by these patients (unaccompanied by drowsiness or confusion) the improvement in this group was felt to be superior to that obtained with other ataractics.

SIDE EFFECTS

Therapy had to be discontinued in two of the 50 cases. One patient complained of drowsiness and another developed a localized rash. Initially, several patients experienced dryness of the mouth, which was relieved by Neostigmine bromide (7.5 to 45 mg. a day). Other side effects, many of them anticholinergic in nature, mentioned by Ayd[6], were not encountered.

Representative case histories in each one of the diagnostic categories follow.

4. Friedgood, C. E., "The Use of Pacatal in a Variety of Clinical Entities." Scientific Exhibit. Presented at the N. Y. State Soc. of Med. Meeting, Feb. 18, 1957.
5. Davies, J. I., et al., *J. Canad. Anaes, Soc.*, 3:224-234,1956.
6. Ayd, F. J., *New York J. Med.*, 57:10,1957.

CASE HISTORIES

Emotional Tension

Man, 38—Highly intelligent, holds a responsible executive position. Fibrositis in chest with fear of heart condition. B. P. 150/90. Allergic history, bronchitis and rhinitis for a number of years. Hypermotility of gastrointestinal tract. Placed on Thorazine, patient still complained of annoying emotional tension. Medication changed to Pacatal, following which marked relief of tension state was experienced. Although patient still has pains due to fibrositis, he does not complain and has a better approach to business problems.

Woman, 72—Emotional tension, repression of several years' duration. Coronary angina, arthritis and family problems have constantly disturbed this patient. Following 50 mg. doses of Pacatal, two to four times daily, she experienced excellent symptomatic benefit and is better able to handle problems.

Anxiety Neuroses

Woman, 36—Suffering from mild fears and phobias. Has fear of all medications; when nervous, left hand perspires profusely. She also suffers from minor gastrointestinal disturbances. All complaints disappeared following 25 mg. doses of Pacatal, three times daily, p. c. On occasions when Pacatal is discontinued, symptoms and complaints return.

Senile Arteriosclerosis

Woman, 65 — Organic deterioration due to cerebro-vascular arteriosclerosis. Depressed, confused, at times agitated. Forgetful and had a constant lugubrious expression. Chlorpromazine benefited this patient initially, then her condition further deteriorated. When chlorpromazine was discontinued her condition became worse. To avoid daytime sedation, meprobamate was employed, 400 mg. once or twice daily, and chlorpromazine was given at bedtime. Patient continued to be overly sedated despite various adjustments in dosage of both medications. Pacatal was then instituted, 50 mg. twice daily, and she exhibited the same improvement derived from the other agents and daytime sedation ceased to be a problem. For the past five months she has been adequately maintained on a total daily dosage of 150 mg. of Pacatal. Her weight and appetite are better and an improvement in her affect is evident. She is more friendly and smiles.

Woman, 67—Arteriosclerosis, hypertension and coronary angina. Blood pressure was 170/100, shortness of breath and cardiac arrhythmia due to premature ventricular systoles. EKG shows left heart strain. Serpasil and periods of bed rest favorably influenced her blood pressure. Family difficulties kept patient in a constant state of worry. Meprobamate was prescribed but patient stopped medication due to undesirable daytime sedation. Meprobamate was prescribed at night for sedation and Pacatal was prescribed for daytime use, 25 mg. four times daily. Patient exhibited a favorable response and she continues to show good progress. Discontinuance of the drug results in a return of her symptoms.

Schizophrenic Reaction

Woman, 43—Paranoid schizophrenic. When first seen, her weight was 87 lbs., blood pressure 100/60. Very rapid sedimentation rate. Low blood cholesterol, low protein bound iodine. Low blood sugar. Evidence of chronic infectious process. Severe hypochromic anemia. Past history — severe toxic psychosis, felt to be due to chronic brucellosis. Institutionalized on several occasions because of hallucinations. Between admissions she exhibited a paranoid personality behavior and was resentful and suspicious, and did not respond to meprobamate or barbiturates. Surgical history — peptic ulcer with partial gastrectomy. Hysterectomy at age 30. Treatment—multiple transfusions. B_{12} and B_6 for anorexia. Two weeks after being seen in the office, Pacatal was prescribed, 50 mg. four times daily, and Sparine at night for sedation. She responded in a remarkable manner and became more manageable. Her weight increased to 94 lbs. During the past three months Pacatal has sustained her improved mental behavior. Prior to Pacatal, her husband was desperate due to the unmanageable state of the patient.

Woman, 45—Diagnosed as a schizophrenic on previous admissions to mental institutions. First hospitalized when in teens. Patient received much psychotherapy and was fairly well stabilized until four years ago, when a panhysterectomy was done due to a cancer. She then received two courses of shock therapy without benefit. Upon discharge from institution, patient became fearful of mother and a neighbor. Although depressed and exhibiting a negativistic attitude, she returned to work. Chlorpromazine was prescribed

in various doses and then combinations of chlorpromazine and meprobamate, but she lost weight and continued to be negativistic. In August of 1956, Pacatal, 25 mg. four times daily, was substituted for other medications and hormones were temporarily continued for surgical menopause. A definite improvement in patient's condition took place four days after commencing Pacatal therapy. She became much more cooperative and soon gained weight. Her vasomotor symptoms ascribed to menopause subsided and hormone therapy was discontinued. The dosage of Pacatal was increased to 50 mg. three times daily, and her condition has continued to remain satisfactory since August of 1956. This patient did not experience any relief from shock therapy and only slight relief from other ataractics.

SUMMARY

Pacatal has proven highly valuable in the management of office patients suffering from emotional tension, anxiety-neuroses, senile arteriosclerosis and schizophrenic reactions. It has a tranquilizing effect without producing mental fogginess. Patients exhibit an improved affect and integrate better with their families and in social life. They become more responsive to suggestions made by the physician.

Emphysematous Cholecystitis

Since Hegner recognized emphysematous cholecystitis by x-ray in 1931, the total number of cases reported has reached 52. Previously the entity had been recognized only at autopsy or laparotomy. The source is probably anaerobic gas-forming organisms in the liver, normally nonpathogenic, likely secondary invaders, complicating the picture of acute cholecystitis.

Since there is an increased incidence of gangrene of the gallbladder and an increased mortality, early cholecystectomy is advised.

Alden, J. F., *Minnesota Med.*, 40:107-108,1957.

ORIGINAL ARTICLE

Psychocutaneous Disorders

Skin disorders may have an organic basis producing nervous symptoms inciting an imbalance of the mental equilibrium

M. W. RUBENSTEIN, M.D.,* *Pittsburgh, Pennsylvania*

Disorders of the skin with an emotional component are common. Among dermatologists the frequency and relative importance of the components is 50% and upwards, depending on the observer's personal bias, prejudice, training and experience.

Just looking at the skin may offer no more information about the patient's complaints than will the clinical thermometer. A proper study is an attempt to determine personality factors prior to and subsequent to the skin changes, the nature and depth of the conflict of the patient's illness; to determine whether the conflict is within the patient, whether it deals with the family, the job, or the interpersonal relationship; whether it is deep and of long standing, or is recent and superficial.

Dermatologists recognize the patient as a unit with a multiplicity of manifestations referable both to the patient's skin and his feelings. These disorders comprise a diversity of entities including those associated with a definite psychosis as delusional parasitosis to those in which the emotional components are quiet apparent, to those in which the emotional component may be subject to further evaluation and study.

It is not the object of this discussion to justify the inclusion of any

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particular dermatologic entity. The textbooks are replete with such classifications, sometimes ponderable. The general practitioner need not have any interest in these, other than to be prepared to deal with them. Recognition of the role of the emotional factors may not be apparent, and a diversity of opinion may be present even among the experts. Greater attention and interest in the emotional components have been met with by verbalized resistance. "You play psychiatrist; do you think I am a mental case, or do you think I am crazy?" expresses hostility rendered by life's experiences and emotional conflicts, the meaning of which may be readily apparent or may require further study.

DEFINITIVE DIAGNOSIS

Emotional conflicts may have physiologic or organic components. Definitive diagnosis is not to be underestimated, nor is it entirely necessary in the management. When the patient tells all of his troubles, relieving some of his burden, confidence is developed between doctor and patient. The patient seeks the aid of the doctor because of anxiety and fear. The more sensitive the patient is about his skin condition, the more the doctor is expected to be friend, relative, spiritual and even legal counsellor.

Understanding, love and care are potent among the remedies. Early, support and aid may be rendered without definitive diagnosis. A statement that the underlying causes are not yet apparent and further study is necessary may establish a good relationship with the patient. Careful examination, concern about complaints, consideration of special technics in the early examination and study are essential, as are a genuine interest in the patient as a person, his family and interpersonal relationships, his work and recreation, his social and religious activities. A rigid denial of the emotional aspect of the cutaneous disturbance may deter further consideration of this therapeutic approach, as may deep probing into childhood, family and sex conflicts, particularily in the early visits.

When there is understanding and the doctor is able to listen and proceed carefully, his efforts may be beneficial. But they may be detrimental if he is insensitive to the patient's point of view, or if in the course of the examination he evokes greater anxiety in the patient, with resultant additional symptom formation. A suspicious or an argumentative patient, incapable of accepting the emotional component in the illness, may provoke the doctor into insecurity and doubt of the correctness of his interpretation of the illness. The doctor, his anger aroused, may then treat the patient as the incorrigible child who provokes scolding, and the therapeutic relationship is lost.

EMOTIONAL FACTORS

Haste and mass production methods are not conducive of best results. A half hour or even an hour spent particularly in the early examination and interviews, especially in patients with minor emotional difficulties, may save long periods of therapies—physical, local, oral, diets, injections and the like—often with little benefit to show for them. These therapies may be temporarily helpful, but may erroneously create in the patient the belief that the cutaneous manifestations are only of

local significance. During or even instead of these procedures it may be necessary to teach the patient to accept and live with his problems.

The patient may be either willing or fearful of attributing the skin disturbance to foci of infection, vitamin deficiencies, endocrine disease, allergic phenomena, bacterial infections, diseases of the internal organs, venereal disease, or emotional disturbances. The practicioner who in the initial visit is able to take a careful history, who is painstaking in the physical examination, who is willing to take the time and is able to listen to the patient's troubles, may soon have the early defenses of the patient broken and a relationship established. In former years any emotional factors were considered secondary to the skin alterations. One of the most common complaints in cutaneous disorders is itching, with or without visible skin changes. The sensation is described by a variety of terms. They are usually unpleasant, though sometimes even erotically pleasurable. Relief is sought by solar, chemical, mechanical, or physical means, usually with success more or less complete, but sometimes with aggravation.

CUTANEOUS SOMATIC SYMBOLS

The therapeutic program may be complicated by the emotional state of the patient, or by the attitude of the doctor, who must clearly avoid iatrogenic complications, who must clearly not regard emotional disturbances as weakness of character, and who in no manner may suggest that the problem is insoluble. An exacerbation of symptoms may be attributed to local or systemic treatment and may have to be further dealt with psychotherapeutically. The symptoms have an important psychodynamic function. Certain of these symptoms may be an essential component of the patient, and the removal of necessary or conscious gratification may be followed by distressing sequelae.

SEXUAL NEUROSIS

The symptom may be the expression of a sexual neurosis closely associated with voluptuous sensations. The response may be the counterpart of masturbation and sexual intercourse or a substitute for unsatisfactory sexual relations. The localization may be anogenital or in any other skin area. Shame in scratching may be responsible for the clandestine aspects of excessive excoriations. The skin damage thus induced may be erotically gratifying or may serve the dual purpose of erotic pleasure and masochistic punishment. A variety of local soothing, irritating, or destructive measures may offer temporary relief of tension and repressed anger. Scratching may serve as a muscular release for the tension created by repressed anger and serve as an act of aggression. The itch-scratch pattern may result as the replacement of an unpleasant sensation by one more unpleasant, giving rise to a vicious itch-scratch-itch circle. The patient and sometimes the doctor may find it easier to accept the anogenital area as an erotic zone rather than the nape of the neck, the axilla, the elbow region, the thigh, or the dorsum of the foot.

A disordered skin may be the reflection of an unhappy person. Such persons carry their emotions in their skin. Scratching under stress and a lowered threshold of skin sensitivity may mirror a troubled mind.

The tribulations of puberty with the feelings of insecurity and inferiority and the need for love and protection may be factors in the activity of the sebaceous glands in acne vulgaris. The two year old infant, sired by an alcoholic father, carried through an emotionally complicated pregnancy, and brought into a world of sibling rivalry, giving cutaneous validation of rejection, may be the "allergic or atopic child" who, along with the family, needs emotional management. An unwanted child, the third girl in the family of a career frustrated father may show her compensatory anger even in early infancy by pulling out her hair. The ten year old daughter of a stuttering father presents scars and newly formed crusts in the scalp, recognized as self-induced traumata. Early it may be learned that a two year old sister was a disappointment to the father, that she is a nuisance to the patient, that the mother's present pregnancy excites the father's hope that the new baby will be a boy, and angers the ten year old that it may be an additional nuisance.

EMOTIONAL EQUILIBRIUM

A neurotic spinstress with frequent bouts of generalization of local patches of eczema may be crying through her skin. During the acute phases of the illness, altered skin reaction is demonstrated by positive patch tests, only to have these tests negative if and when emotional equilibrium returns. The patient with angioneurotic edema, disappointedly married to a male who wants to play the role of the little son, has a feeling of being incapable of dealing with the situation, seeks out the doctor to play the role of marriage counsellor. The girl, 12 years of age, in an acute exacerbation of eczema present since infancy, is labeled the allergic child. She is in a private room and the mother, a former nurse, hovers over the child and names the numerous food allergies from which this only child has suffered since cradle days. Milk, the mother alleges, is a particular offender. At precisely this time the nurse on the floor in her routine rounds offers the child a glass of milk. The mother shudders. After talking with the child for a few minutes it is learned that she is able to eat ice cream without dire consequences. With assurances offered, particularly to the mother, the child is moved to a ward with other children. The allergies to foods no longer exist.

INTENSIVE PSYCHOTHERAPY

Success is not always so easily obtained. Sometimes the patient's symptoms become aggravated and may require intensive psychotherapy. The psychological therapeutic objective is not so simple as probing into the deep layers of the mind and removing a cause, but paving the way for the patient to achieve balances in the adaptive and the maladaptive life's resources. The doctor must be alert to the cutaneous somatic symbol and to be curious in understanding personality dynamics. These persons carry their burdens in their skin, and, of course, may concomitantly suffer with symptoms referable to other body systems. Psychoses occur but suicides are rare. Conflicts that are not conscious are repressed into the unconscious. The skin neurosis apparently protects the patient from destroying himself or others.

The art of listening without inter-

ruption is not the sole right of the psychiatrist. There can be no end to the plea that the physician attempt to understand the patient as a unit. As the story unfolds, revealing pertinent facts it serves as diagnosis and therapy, with constant awareness that although the disorder may be morphologically limited to the skin, the total organism may be involved in a series of sociologic, psychologic, and emotional crises.

Stress in Relation to Cardiac and Vascular Deaths

A direct association, well beyond the realm of chance occurrence, has been found to exist between cardiovascular disease death rates in men and the amount of cigarettes they smoke. Superimposed upon all categories of this cigarette smoking relationship is a further sharp rise in the death-rate associated with driving annually a distance of more than 12,000 miles. Still further superimposition in all categories is associated with residence in the solidly built-up basin areas of a city.

These relationships are essentially analogous to those found to exist for lung cancer death rates in men, although the apparent exacerbating relationship was much greater between smoking and lung cancer deaths than between smoking and cardiovascular disease deaths.

Mills, C. A., & Porter, M. M., *Am. J. M. Sc.*, 234:35-43,1957.

ORIGINAL ARTICLE

Common Eye Problems Encountered in General Practice

Pathological lesions of the eye that may be diagnosed and, in some instances, treated by the general practitioner

JAMES S. SHIPMAN, M.D. and CYRIL M. LUCE, M.D.,
Camden, New Jersey

Many general practitioners will not attempt to treat a simple eye problem; a few, on the other hand, will treat a serious lesion that he had best refer. Most general practitioners probably encounter 1 to 2% eye patients in the total of their practice. The two segments of the population more likely to have ocular diseases are the young and the aged. Persons 20 to 40 years of age are not very likely to have serious eye disease, except for traumatic and inflammatory lesions. In infancy, many ocular lesions are missed because of inattention and difficulty of examination. Those who do obstetrics and pediatrics should make at least a cursory examination of the infant's eyes — the orbits to see whether the globes are of equal size, corneas clear, pupillary spaces black, and conjunctivas pink. Such care serves to show that the general practitioner is interested in all phases of the child's health.

In the first year of life, certain ocular defects may be noted. The general practitioner should have a clear mental picture of the proper

size of the globe so that he can detect early a small globe — about which little can be done, or a large globe, congenital glaucoma, about which a great deal can be done in the early stages.

Coloboma of the eye is an uncommon lesion involving the lid, causing a notched defect; the iris, causing a keyhole pupil; the lens; the ciliary body; the choroid; the retina; and the optic nerve. One or all of these structures may be affected in a given case. Except for plastic repair of the lid, there is no treatment available.

Dermoid cysts, occasionally found by the mother, are small tumors located beneath the upper lid near the outer canthus. The treatment consists of a careful dissection of the mass. These masses often occupy a considerable space in the orbit. They should be handled only by a competent ophthalmic surgeon.

Congenital cataracts are fairly common and may present a problem in differential diagnosis. It is well to remember that some congenital cataracts are compatible with fairly good vision, and that in general this type cataract is progressive. Congenital cataract is one of the many congenital defects that maternal rubella in the first trimester of pregnancy can cause.

Retinoblastoma or *glioma* is one of the most distressing of all congenital diseases. This tumor is usually considered to be present at birth or shortly after; however, it may occur later, causing a white pupil, usually first noted by the mother. The only treatment is enucleation and observation of the remaining eye. The tumor is bilateral in 25% of the cases, and is fatal unless the eye is removed.

Retrolental fibroplasia, a hopeless condition in early infancy, has been more than adequately reviewed in the literature of the last five years. Prematures should be carefully controlled as to the amount of oxygen they receive. Most investigators now believe that the oxygen concentration should not exceed 40%, that oxygen should be given for the shortest period possible, and that it is wise to use a gradual oxygen weaning process.

Hemangioma on the lids or periorbital area is a common congenital defect. A large percentage of these lesions will disappear without treatment. For those that do not, some type of surgical approach, such as dry ice, sclerosing solutions, or best of all, surgical removal, gives good results.

Tearing is a problem which seems to plague general practitioners in the first year of the infant's life. Many of these cases will clear without treatment other than local antibiotic therapy and massage over the lacrimal sac. Those which do not respond within a month or two should be seen by an ophthalmologist, to have the puncta dilated and the lacrimal sac irrigated through by a minor surgical procedure.

Squint or *cross-eye* constitutes another major problem to the general practitioner. The safe thing to do when this condition is questionable is to refer the family to an ophthalmologist *early.* Certainly today surgery for the correction of this condition is done much earlier in life, 1 to 3 years of age.

Trauma is frequent throughout the growing up period. Ocular trauma is all too common—from airguns, bows and arrows, swords, flip-

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seasonal rhinitis (Hay Fever)
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reprints and literature available.

1. *Clin. Med. 2:1009, 1955.*
2. *Amer. Pract. & Digest Treat. 7:1447, 1956.*
3. *Clin. Med. 3:1059, 1956.*
4. *Unpublished data.*

available: multiple-dose vials containing 8 ml.—one average treatment course.

MULFORD COLLOID LABORATORIES, Philadelphia 4, Pennsylvania

**T.M. Reg. U.S. Pat. Of.*

per, and other weapons of childhood. The ophthalmologist should have the care of all cases that have a marked visual loss in the affected eye. Also those cases that show a definite difference in the external appearance of the two eyes.

"*Red eye*," the four most common causes of this being conjunctivitis, allergy, iritis, and glaucoma. In the first two conditions the vision is normal there is no pain, but rather only a mild foreign body type sensation and the cornea, anterior chamber, iris and pupil are intact. The congestion is *brick red*, and is *less* intense at the limbus than it is farther away. In iritis and glaucoma the vision is usually reduced, and the congestion is more of a *purplish red* and *more* intense near the limbus. The cornea may be hazy, the iris muddy, and the pupil not equal to its fellow. Therefore, it is easy to decide which cases to treat and which cases to refer. If the vision is normal, no actual pain is present, and the anterior segment of the globe appears normal, except for conjunctival congestion and discharge, then you may treat the eye with reasonable safety. If the vision is reduced, pain is present, and the normal anatomy of the visible portion of the eye is disturbed, it is best to refer the patient both for his good and yours.

Foreign bodies are encountered more frequently in the 20 to 40 year age group. The technic of the removal of a corneal foreign body concerns all. First, take the vision of each eye separately and then instill a local anesthetic, e.g., pontocaine ½%. Then evert the upper lid of the affected eye, and remove any foreign body with a moistened cotton applicator. The cornea is then inspected for an embedded foreign body and, if found, this is removed with a suitable steel spud. A corneal foreign body should not be removed with a moistened cotton applicator because the resulting corneal abrasion is often more severe than the original foreign body. A spud with a fairly sharp triangular tip on one end, and a small dental burr on the other is preferred. This is excellent for curetting iron-oxide pigment. The pupil should be dilated with homatropine, an antibiotic instilled, and then a mild pressure patch applied. The patient should be seen again in 24 hours. The eye should be well or nearly well at that time. If it is not, it is wise to refer the patient for more specialized care.

A very careful history should be taken in all accident cases, and this will often suggest the possibility of an intra-ocular foreign body. Careful observation of the lids, cornea and conjunctiva should always be made with special attention to evidences of a small laceration or perforation of the globe, with particular attention to any disturbance of the normal anatomy of the anterior segment. If there is any doubt, always refer the patient for x-ray examination.

OLDER AGE GROUP

In the older age group, the eye is subject to many disorders, and here the family doctor can be of great comfort. The fear of blindness is strong in many people, and the family doctor is in a position to relieve this fear with a minimum of delay and expense. He may also cooperate with the ophthalmologist in treatment of the aging patient in whom degenerative diseases are so common.

Cataract to most patients means

blindness, but it should not, since loss of vision due to this can be most easily relieved. Cataract extraction is now done much earlier than it used to be, and a patient does not have to wait until he goes blind before having the operation. Much harm can be done to a patient physically, emotionally and economically by unwise advice.

Chronic simple glaucoma is one of the most serious ocular problems of the elderly group. There is no simple diagnostic procedure to determine its presence. The symptoms are insidious, and the findings are minimal. Tonometer measurements on all general patients over 40 seems as remote as routine pelvic and rectal examinations were 30 years ago. The general practitioner should have a high "glaucoma suspicion" in all patients over 40 who complain of headaches, blurred vision, seeing halos or rings around lights, difficulty in reading, poor night vision, and watery or red eyes. These patients ordinarily have a refraction problem that needs attention and a referral will be welcomed by them, but occasionally their symptoms are not simply on the basis of a refractive error and are due to the presence of chronic simple glaucoma.

Diabetes and vascular lesions of the brain can often cause damage to the nuclei of the extraocular muscles with resultant sudden diplopia and squint. Every doctor should be aware of these complications so that he be not taken off guard.

Diabetic Retinopathy, here the ophthalmologist can be of great help in softening the blow and preparing the patient for ultimate blindness. Treatment is of no avail.

Hypertensive retinopathy from essential hypertension, renal disease, and pregnancy is often a problem from the visual standpoint. Here the ophthalmologist can serve by giving periodic reports of the fundus findings and helping with the therapeutic regimen.

Occasionally an older patient with vascular disease will come to you with a history of sudden loss of vision in one eye. The lesion will usually prove to be an occlusion of the central vein or artery. Sometimes it will be due to large vitreous hemorrhage. It is wise to remember that not all vitreous hemorrhages come from hypertensive or arteriosclerotic vessels. Many times they come from diabetic retinopathy. Also some are associated with melanomas of the choroid and retinal detachments.

The doctor does not have to be an ophthalmologist to diagnose and treat many ocular conditions.

ORIGINAL ARTICLE

Cold Wave Dermatitis

Contact dermatitis may be found in a small number of patients, with severe sensitivity developing after repeated exposures

JAMES J. BARROCK, M.D., *Milwaukee, Wisconsin*

With the increase in recent years in the use of cosmetics, a number of patients have developed a contact dermatitis from the various cosmetics.

THE OFFENDING CHEMICALS

The cold permanent wave solutions contain substances with an alkaline reaction, as ammonium salts, carbonates, phosphates and thioglycolates. The chemicals producing a contact dermatitis from cold permanent wave solutions are the alkalies, the resins, the preservatives and the solvents.

PRIMARY IRRITANTS

These are divided into primary irritants and sensitizers. A primary cutaneous irritant in a proper concentration or quantity over a period of time will produce a dermatitis by direct action at the site of contact. A primary irritant may also be a sensitizer. When an individual becomes sensitized to a primary irritant, the smallest amount of the chemical when reapplied to the same area will produce a contact dermatitis a week to several months following exposure. Very few primary irritants are used in modern cosmetics. Concentrated hair solutions will produce a dermatitis more often than diluted solutions.

Most of the dermatoses produced by cosmetics are due not so much to

for your elderly patients

safe and sure laxation

Agoral relieves constipation gently, without strain. A dose taken at bedtime almost always produces results the next morning. A patient taking Agoral can follow his or her normal daily routine because Agoral does not provoke the sudden urge induced by strong laxatives.

Excellent in geriatrics, Agoral solves one of the major, recurrent problems in this field, acting gently and positively. Agoral is also well suited to all other cases of acute and chronic constipation, where straining or purges are to be avoided: Postoperatively, during and after pregnancy, and in bedridden patients.

Agoral mixes readily and uniformly with the intestinal contents during its passage through the tract. It aids in the retentio of fluid in the fecal column, affords lubr cation and provides mild peristalti stimulation. Agoral causes no sudde uncomfortable griping, distention o stomach distress. Used for prompt relie it is nonhabit-forming and may be pr scribed for protracted periods.

Dosage: At bedtime, ½ to 1 tablespoo ful. Contraindications: Symptoms o appendicitis; idiosyncrasy to phenol phthalein.

Supplied: Bottles of 6, 10 and 16 fluid ounces; and as Agoral Plain (without phenolphthalein), bottles of 6 and 1 fluidounces.

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the irritating properties of the cosmetics but to the fact that the persons developing a dermatitis are or have become sensitized to the cosmetics after repeated applications. Manufacturers are producing cosmetics that are practically harmless.

CARELESSNESS

In the careless application of a cold permanent waving solution, the patient immediately complains of a burning and biting sensation at the area of the scalp, face, ears and neck. The operator should immediately stop the application of the solution and wash it off with repeated rinses of water to prevent a dermatitis from developing. She should not wait until she has completed the placement of all the curlers to the hair as many operators do.

SYMPTOMS

A cutaneous eruption of the scalp, face, ears and neck appears within a few minutes to several hours after the application of the cold permanent wave solution. The patient complains of a burning, itching and stinging. There are mild to severe erythema, with edema, vesicles, papules, oozing and crust-formation. The dermatitis is usually localized to the area of application of the solution. A secondary infection may develop due to scratching. The patient is restless, nervous and sleeps poorly. Chronic skin changes rarely occur.

SEQUELAS

One of my patients developed a permanent hyperpigmentation on the forehead after a severe contact dermatitis resulting from dripping cold wave solution on her forehead. Maculo-papular eruptions of the face and forehead have been reported by Gould.[1] Simeone and Hardy[2] reported a case of chronic progressive infectious gangrene in a hair dresser who was exposed to cold wave solutions.

The hair undergoes fragmentation, splitting and loss of elasticity, becomes dry, loses its sheen and softness. A color change may also take place.[3] Thinning of the hair of the scalp occurs in many patients resulting in a temporary alopecia areata. A perforated eardrum was reported by Sataloff and Wilson[4] following the use of a home permanent wave solution which accidentally ran into her left ear. Fatalities[5-6] have been reported by the accidental ingestion of a bromate cold wave neutralizer. Muscular pains, headache, vertigo, nausea, emesis, oliguria,[7] anuria, nocturia,[8] albuminuria,[9] and anemia[10] have been reported.

POINTS IN CARE

A cold wave solution containing less than 8% ammonium thioglycolate is considered nontoxic.[11] Other ingredients such as perfumes, wetting agents and solvents may be a causative factor. In most instances a dermatitis results from failure to follow the directions of the manufacturer.

The number of beauticians developing a dermatitis of the hands is

1. Gould, A. V., Jr., *J.A.M.A.*, 143:1128,1950.
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3. Brunner, M. J., *Arch. Dermat. & Syph.*, 65:316-326,1952.
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11. McNally, W. D., & Scull, R. H., *Arch. Dermat. & Syph.*, 57:275-278,1948.

on the increase despite repeated warnings of the manufacturers. Once a beautician has developed a dermatitis of her hands, fingers, and forearms due to repeated exposures to cold permanent wave solutions, she may not be able to continue in her occupation.

COLD WAVE TECHNIQUE

The hair must be thoroughly shampooed and must be rinsed well before the cold wave solution is applied. If the hair has been recently bleached or tinted, the cold wave permanent must be delayed. Any previous unwarranted experience with cold wave solution should be reported to the operator. The operator should wear clean rubber gloves, a rubber apron and impervious sleevelets. The gloves may be disinfected by immersion in a germicidal solution for 10 to 15 minutes. Only superfatted sulfonated oils and soaps should be used on the hands. A good cream containing animal or vegetable oils should be applied each night to the hands at bedtime.

PATCH TESTING

A patient who has had dermatitis from cold waving should be patch tested with all materials used in the cold waving process. The patient should be patch tested with individual ingredients and combinations of two or more ingredients one to two months after the dermatitis has subsided. The patient should never be patch tested in the acute phase as a generalized dermatitis may develop.

TREATMENT

Plain, simple, soothing therapy and avoidance in the future of cold wave permanent solutions are necessary. Once the removal of the contactant is complete, recovery is rapid. Cortisone or Corticotropin is beneficial for the first three days. In the acute stage, cool to lukewarm compresses of potassium permanganate or Burows solutions are in order. For a secondary infection, hot compresses, followed by an antibiotic ointment. Avoid penicillin, sulfonamides, antihistaminics, tars and mercurials locally. Lotions may be used between the application of compresses and ointments, after inflammation and oozing have subsided. Do not use soaps for cleansing, as they irritate an inflamed skin.

Diagnosis and Office Treatment of Sinusitis

A classification of the types of sinus infection and the current methods of medical and surgical management

JOHN C. LILLIE, M.D., *Rochester, Minnesota*

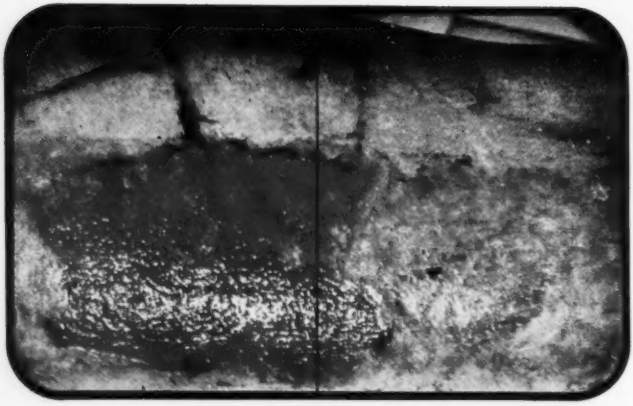
Inflammation may affect the mucous membrane of any or all the paranasal sinuses.

DEFENSE

Primary—The first line of defense of the nose against infection consists of the combination of the mucous blanket, the ciliary stream and lysozyme lying on an intact ciliated epithelium. Disturbances in surface defense, either general or localized, may result from dietary or alcoholic excesses, nutritional deficiencies, anatomic deviations producing dry spots or severe obstruction, endocrine abnormalities, use of some drugs, severe systemic disease, too low atmospheric humidity, and intranasal medication.

Alkaline medication destroys lysozyme. Irritating substances may stop ciliary motion or kill the epithelium. Oily substances may render the mucous blanket too viscid to move. Potent vasoconstrictors may upset the delicate vasomotor control. Allergic disorders produce edema and disturbance of mucosal drainage.

Secondary—The surface defense failing, the stroma prepared for its role by the epithelial infection becomes the defense organ. Protection is provided by leukocytes and other agents from the blood called to the stroma in the acute inflammatory reaction. If this defense is adequate,



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Jeffords, J. V., and Hagerty, R. F.: Ann. Surg. *145*:169, 1957

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the infection is resolved in two or three days. If it fails, or if secondary bacterial invasion overwhelms it, acute sinusitis follows. Defense continues until healing occurs, the condition becomes chronic, or the infection spreads beyond it.

Of factors tending to promote continuing, recurrent infection or spread of infection, the most important are narrowing of the drainage paths and failure of the ciliary stream.

CAUSATIVE ORGANISMS

The precursors of sinusitis are the viruses of acute coryza. The bacteria usually found include cocci, *H. influenzae* and Klebsiella bacteria. When closed cavities are infected, usually anerobic streptococci may be isolated. With the promiscuous use of antibiotics, infections with Gram-negative organisms are occurring in increasing numbers.

SYMPTOMS AND SIGNS

The pain tends to be local; that of the maxillary sinuses, in the cheeks, teeth and often the supraorbital regions; that of frontal sinuses, in the frontal or temporal regions; that of ethmoid disease between, above and behind the eyes; that of sphenoid sinusitis deep behind the eyes, even to the occiput or vertex. The pain usually results from the pressure of infection in a closed cavity, or from edema involving nerve endings near the ostia. It often is intermittent, usually aggravated by coughing, stooping and straining.

Usually the nasal mucosa is red and swollen, especially in the region of drainage of the sinuses involved. Pus may be seen at the middle meatus from the frontal and maxillary sinuses and the anterior ethmoid cells; and at the superior meatus and spheno-ethmoid recess from the posterior ethmoid cells and the sphenoid sinuses.

DIAGNOSIS

Diagnosis depends on history, inspection of the nose, x-ray examination and the results of lavage of the affected sinus. Both anterior and posterior rhinoscopy should be performed. Irrigation of the ethmoid cells is not feasible, nor often feasible when the frontal or sphenoid sinuses require treatment; suction, following shrinkage and cleansing frequently discloses the source of the secretion. X-rays seldom are needed in diagnosis of acute sinusitis.

TREATMENT

The trend is toward conservatism. General treatment consists of supportive and antibacterial measures. Analgesics, sedatives, quiet and avoidance of chilling are in order. Antibacterial measures include use of sulfonamides, antibiotics, vaccinea, and serums.

Drainage is essential. In acute sinusitis the early, severe edema and epithelial damage interfere with drainage. In 2 or 3 days, drainage probably will be effected through the mucociliary mechanism. Help this by moist, warm air and adequate fluids using no drugs that induce drying, no intranasal medications that injure the mucociliary system; e.g., menthol, camphor, alkaline and sulfonamide solutions, antiseptics, oily substances and strong solutions of cocaine. Prolonged douching also is injurious. When the head is semi-erect, gravity helps drainage. Tobacco and alcohol should be avoided.

Of vasoconstrictors, the best are 1 to 2% ephedrine HCl, and 0.25 to

0.5% solution of phenylephrine (neosynephrine) HCl. After seven to ten days, if drainage still is inadequate, irrigations by cannula or displacement treatments usually are instituted. Minor surgical procedures, such as infraction of the middle concha, may be needed to open channels of drainage. Lavage is not without some dangers, one of which is formation of air embolism.

Displacement treatment has dangers of contamination of uninvolved sinuses and the eustachian tube. The Dowling pack provides slow decongestion with no "rebound"; this, followed by gentle suction, works well. Use of hot compresses, infrared lamps and diathermy gives much relief and encourages drainage. Heat is best used after the early edematous stage.

Promotion of drainage in chronic cases is primarily a surgical problem. Anti-allergic measures are important for chronic, nonsuppurative, and also for mixed chronic sinusitis. These include hyposensitization, use of antihistamines and vasodilator drugs, and avoidance of offending allergens.

Minnesota Med., 40:21-26,1957.

Nausea and Vomiting of Pregnancy

Bonadoxin® is a great advance in the management of nausea and vomiting, both in the first trimester of pregnancy and in the early postoperative period. Toxicity or intolerance to the medication was zero. The longest administration was three weeks; the largest dose was two tablets in a 24-hour period. The only side effect noted by any patient was moderate sedation, extreme in less than 5%, usually in the first 48 hours.

Goldsmith, J. W., *Minnesota Med.*, 40:99-101,1957.

The Atherosclerotic Limb

Intermittent claudication is the most frequent and often the earliest symptom; changes found in the pulses of lower extremities are characteristic

THOMAS H. PALMER, JR., M.D., *Boston, Massachusetts*

Arteriosclerosis obliterans is a progressive disease, but there may be long periods of quiescence with intermittent exacerbations. The chief symptom is pain of different patterns. Intermittent claudication is similar to angina pectoris in that both are produced by ischemia of muscle, both may be diagnosed by history alone, and in both the pain comes on during exertion and is relieved by rest. If the femoral artery is blocked, claudication may occur in the calf muscles. Gradual thrombosis at the bifurcation of the aorta produces claudication in the thighs and buttocks. With extensive arterial obstruction, the pain may come on after climbing stairs or walking 100 feet. If the obstruction is small the patient may be able to walk ½ mile without symptoms. In a patient past the age of 50, typical claudication almost always means arteriosclerosis obliterans. Pain in this disease due to ischemic degeneration of peripheral nerves follows the distribution of the involved nerve, may be constant or intermittent, and may be with paresthesias.

Changes in the pulses of the lower extremities are the cardinal sign. The normal femoral artery pulsations in the groin are easily felt. A common site of femoral occlusion is a short distance below the groin. Pulsations felt below this point in one thigh and not in the other is

good evidence for such an occlusion. If popliteal pulse cannot be felt with the patient supine and the knee flexed somewhat, it may perhaps be found with the patient prone, the knee flexed 90°. If there is a strong femoral pulse and no popliteal pulse, an arterial occlusion in the thigh, most often in the distal third, can be expected. If the femoral pulse is weak or absent just beyond the inguinal ligament, a partial or complete block can be expected above this site. The dorsalis pedis artery is sought lateral to the extensor tendon of the big toe. There may be congenital absence, usually bilateral, of this vessel, or it may follow an abnormal course. The posterior tibial just behind the medial malleolus is more constant and more reliable.

The oscillometer's chief value is to confirm. The sphygmomanometer will serve the same purpose roughly. By applying the cuff to various levels of limb, pressure is allowed to slowly drop after inflation, noting degree of fluctuations of needle or mercury column with each heart beat.

Postural skin color changes of the lower extremities may be diagnostic. If the normal lower extremity is elevated above the level of the heart for 30 seconds, mild pallor normally occurs. In mild ischemia there may be only slightly increased pallor, if there is extensive arterial obliteration the limb may become white. When the normal limb is placed in a dependent position after elevation the color returns in 10 seconds. In occlusive arterial disease the color returns in 15 to 60 seconds. The development of redness in the skin of a dependent limb is further evidence of ischemia due to capillary atony, as a result of anoxia. The redness most often involves the toes, may be the entire foot. The back of the examiner's hand can appreciate a difference in temperature of 2° C. An ischemic foot is often cooler than its opposite.

NON-OPERATIVE TREATMENT

The feet should be washed daily and dried carefully. Toenails should be cut straight across. Corns, calluses, minor infections and traumata may be of serious consequence. Hot-water bottles, hot soaking, or heating pads to the feet should never be used. Smoking should be interdicted.

Patients with intermittent claudication should exercise to the point of tolerance. Patient lying down with the extremity elevated along the back of the chair placed in the bed, after 1-1½ minutes should sit up with the legs hung over the edge of the bed for another 1-1½ minutes and then lie horizontal for 2 minutes before repeating the sequence. This should be done several times daily.

Vasodilator drugs are of questionable value. The incidence of side effects is high. Alcohol, up to 3 oz. daily, may be of psychologic value as well as a vasodilator. Reflex vasodilation can be produced by applying heat to the abdomen or other parts of the body with the absolute exception of the ischemic limb.

J. Maine M. A., 47:377-380,1956.

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References: 1. Case reports in the Pfizer Medical Department Files from fifty-three clinicians, and the following published reports: Shubin, H.: Antibiotic Med. & Clin. Therapy 4:174 (March) 1957. Carter, C. H., and Maley, M. C.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 51. Winton, S. S., and Chesrow, E.: Ibid., p. 55. LaCaille, R. A., and Prigot, A.: Ibid., p. 19.

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Lacerations of the Birth Canal

Awareness of laceration possibility, immediate and careful inspection of the entire tract, and prompt treatment of hemotomatas and tears are urged

JOHN E. SAVAGE, M.D., *Baltimore, Maryland*

Generative tract lacerations play a much greater role in the etiology of postpartum hemorrhage than is generally recognized. Tears of the clitoris and of the vestibular bulbs may cause serious hemorrhage, as may rupture of varices in the vulva and vagina. Perineal and lower vaginal tears bleed less. Cervical lacerations, especially those associated with high vaginal tears, may bleed profusely. All of these lesions may follow spontaneous delivery.

AWARENESS—EXAMINATION

Two essentials in the diagnosis of birth canal lacerations are: an ingrained awareness on the part of the physician of their possibility; and the immediate, routine, and meticulous inspection of the entire tract following all deliveries. The latter is especially important when dealing with aseptic and nonsterile spontaneous births. Continued vaginal bleeding after efficient uterine contraction demands inspection and re-inspection of the birth passage. Proper conditions for adequate inspection include: aseptic technic (the patient who has "precipitated" must be prepared and draped); standard equipment for repair; an assistant to provide exposure by retraction; and good lighting. Upward displacement of the cervix (after its inspection) by means of a vaginal pack ("tail" or "tagged") will facil-

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ite inspection of the vagina. In this way lacerations may be seen, and early hematomas can be seen or palpated and treated before they reach serious proportions. Such a pack further serves to keep the contracted uterus out of the pelvis, thus enhancing its contractility and limiting blood loss during any repair.

EPISIOTOMY AS A ROUTINE

All deliveries with forceps should be preceded by an episiotomy and its routine use could well be applied to spontaneous deliveries.

REPAIR PROMPTLY

Repair of all lacerations should be made promptly after delivery. Labial and clitoral tears bleed profusely. Their repair should be immediate, using fine catgut on an atraumatic needle. Counter pressure with a gauze pad and "T" binder may be required. An episiotomy may extend and become either a third- or fourth-degree laceration. Repair of the first-degree tear consists of restoring the mucosa, any deep structures which are involved, fascia and skin. Second degree tear repair requires suture of the levator ani and any other deep muscles involved. The sphincter ani muscle and its capsule must be united in third-degree tears. The anal wall must be sutured in repairing a fourth-degree tear.

Vaginal lacerations occur in conjunction with or independent of perineal tears. Sulcus tears are frequently seen following forceps deliveries in which the fetal head has been rotated. Continuous lock-stitch sutures are preferable for hemostasis in the repair of mucosal lacerations, the deeper structures having first been united. Sometimes a vaginal pack may be advisable for counterpressure, but it must be inserted gently, and lubricated lightly with some antibiotic ointment.

VAGINAL HEMATOMATA

Almost always any hematomata may be detected by routine inspection of the vagina. Palpation of the vaginal walls will often detect a crepitant or fluctuant area which has not yet become visible. Treatment is by a simple and effective technique: incision, evacuation and deep suture ligation. With the scissors, a 2- to 3-cm. incision is made in the vaginal mucosa at the apex of the hematoma. A finger then assists in the evacuation of clots. Firm pressure is made over the site until the sutures are placed. One or two 0 or 00 "figure-of-eight" chromic catgut sutures are then inserted so as to include the pelvic cellular tissue if the hematoma is in the upper third of the vagina, the levator ani muscles and fascia in the middle third, and the bulbocavernosus and the vestibular bulbs in the lower third. This simple procedure avoids the long and often fruitless search for a bleeding point or points, and precludes the necessity of inserting an infection-producing pack into the hematoma cavity. The area is frequently observed and palpated during an episiotomy repair to make certain that bleeding has ceased. Final inspection is made after completion of such repair. If the hematoma has been more than 5 cm. in diameter, a catheter is placed in the bladder and a moderately tight vaginal pack, lubricated lightly with an antibiotic ointment, is inserted. The catheter and the pack are removed eight to 12 hours later. Anti-

microbial agents for systemic action were not used routinely.

FIND HEMATOMATA EARLY WHEN THEY ARE SMALL

If small immediate hematomata go undetected, the large delayed variety may result. These may be labial or paravaginal according to whether they are inferior or superior to the levator muscles and fascia. The labial type may involve contiguous tissues; the paravaginal form, by upward dissection, may extend to the base of the broad ligament and point above the inguinal ligament; or they may even extend to the iliac fossa and upward to the renal area finally reaching the diaphragm. Active treatment is to be instituted if the hematoma is becoming progressively larger. Local incision is used for the labial type, while the abdominal approach is usually preferred for those hematomata developing above the pelvic fascia. Clots are evacuated and hemostasis by suture secured if bleeding points are discoverable. A tight pack is placed in the cavity and a vaginal pack is inserted for counterpressure, left in place for 12 to 24 hours, and removed gradually. Blood replacement and broad-spectrum antibiotics are essential.

CERVICAL TEARS

Cervical injuries may be unilateral or bilateral tears, from less than 1 cm. to those involving the entire cervix; stellate lacerations; and the uncommon anterior and posterior tears. Rupture of the membranes before 50 per cent effacement of the cervix predisposes to lacerations. Those following precipitate delivery may be as extensive as those following operative delivery. Inspect the cervix following every delivery. In the repair of cervical lacerations interrupted or continuous lock-stitch sutures may be used, the latter requiring less time to insert. Be certain that the first suture is one-half to one cm. above the angle of the wound, to secure any vessels which may have retracted. All sutures must include the circumcervical fascia. The last suture approximates the squamo-columnar junction accurately.

J. Louisiana State M. Soc., 109:164-172,1957.

Present Status of Leucotomy

In patients carefully selected for surgery, operation on the frontal lobes is not necessarily damaging to personality, and results are good

WALTER FREEMAN, M.D., Ph.D., *Washington, D. C.*

Leucotomy achieves its most satisfactory results in patients who are distressed by feelings of anxiety, obsessive thinking and tortured self-concern. The operation reduces the emotional tension to a point where it no longer disables the patient. It has been successfully employed in certain psychoses and psychoneuroses, and in psychosomatic disorders and pain syndromes that can be relieved in no other way. Patients who have given up the struggle, or who take refuge in alcohol or drugs, are generally poor prospects for surgery. A deteriorated schizophrenic looks and acts the same with or without his frontal lobes.

Leucotomy may be socially dangerous in patients with aggressive antisocial traits. Although the almost complete absence of sex crimes by leucotomized patients is noteworthy, leucotomy is not recommended in the treatment of the sexual offender. Persons who commit crimes of violence under the influence of a psychosis are often favorable candidates. Leucotomy is to be undertaken with reluctance in those of superior intellectual and social accomplishments. Artists, musicians, physicians, writers and ministers may lose much of their value as the result of their mental disorder combined with leucotomy.

A few seem unharmed by the operation and manifest social poise,

ambition, creativeness, executive capacity and altruism as before. These patients accomplish more than might be expected because they are freed by operation from the burden of painful self-consciousness and sensitivity to criticism.

Leucotomy does not necessarily interfere with development of the personality into a more mature and wholesome state. Of a series of more than 600, all of the survivors have been traced for five years, many for over ten years. Social effectiveness was chosen as the criterion of success. It requires about two years for the patient to become stabilized after leucotomy. In this time, patients who relapse are about balanced by those who improve slowly. Thereafter, for many years there is substantial stabilization.

FAMILY SUPPORT IMPORTANT

Comparison of patients operated upon as private patients and those operated upon in a public mental hospital shows striking differences. Of the 60 in the Freeman-Watts series, mostly schizophrenics, 35% of the men and 45% of the women were out of the hospital for a period of more than six months. Among these schizophrenics, 60% remaining in the hospital, among private patients, 30%.

While the St. Elizabeth's patients had been hospitalized longer on the average (6.5 years vs. 3.5 years for the private patients), the support given by the family must be considered as of equal or greater importance in the outcome.

GREATEST HAZARD IN DELAY

For fear of producing unfavorable personality changes through operation, this is delayed until other methods can be thoroughly tested. Now it seems proven that operation on the frontal lobes is not necessarily damaging to the personality. Among the hazards of leucotomy, the greatest appears to be the hazard of delay.

INDICATIONS

Among the clear indications for surgery are:

1. *Relapse into disability,* which shows that the patient is poorly armed to cope with the normal experiences of existence, and relapses are apt to lead to personality injury more serious than the mild effects of a leucotomy carried out before deterioration becomes noticeable.

2. *Duration of attack.* On the basis of 25,000 first admissions, Malzberg states: "It is evident that the chance of discharge declines rapidly after two years of hospitalization." Granted that early treatment can restore 60% of patients (although relapses are threatened), there is another 40% of first admissions that do not stay well. It seems preferable to operate upon the patient who has shown unsatisfactory progress in the second six months.

3. *Duration of hospitalization.* It appears that leucotomy can bring about release from the hospital of many who can return to their homes and work productively.

The gain to the individual is in terms of relief from suffering, of restoration to productive existence, and in enhanced self-esteem. On all these counts leucotomy has accomplished more in a short time than any other therapy. While the patient is at first in the hospital, undergoing treatments that have good chance of restoring him to the family circle, the interest of the family

is maintained on a high plane. With the passage of time, the broken ranks are closed and the family goes ahead without the patient. At a much later date, should the patient be fit to resume family life, all too often there is no longer a place for the patient. The best time to operate is during the first year, and the best time for release after operation is at the end of surgical convalescence.

3. *Leucotomy in patients experiencing intractable pain* gives best results in cases emotionally upset by the pain, who require large doses of opiates, and who have not very long to live. The relief may last six to nine months. Such patients are relieved of their suffering, rather than of the pain itself. Pain of high intensity is of short duration and elicits an agonized response from the patient, however extensive his leucotomy may have been. Such pain is unbearable and will throw the patient into shock if long continued. With the suffering of the cancerous patient modified, the patient will often rest more and gain weight and strength for a while, until the malignant process produces the terminal cachexia.

Pain of causalgia, phantom limb, tabes dorsalis and post-herpetic neuralgia is less satisfactorily influenced by leucotomy. The modified operations are not always successful and the radical operations are disastrous.

Proc. Royal Soc. Med., 50:79-84,1957.

Diaphragmatic Hernia

Medical management and surgical routes and techniques for repair are outlined for various types of herniae that are frequently encountered

ROBERT G. WOCHOS, M.D., *Green Bay, Wisconsin*

CONGENITAL HERNIAE

Since the pleural and peritoneal surfaces of the diaphragm do not cover the developing partition until the third fetal month, these herniae will have a sac if they occur after the end of the second fetal month, and no sac if they occur before that time. Common symptoms of these herniae include cyanosis, dyspnea and vomiting. In the newborn infant with extensive displacement of abdominal viscera into the thorax, respiratory impairment may be extreme, and gastrointestinal obstruction may complicate the picture. With the smaller herniae, vague symptoms may occur due to partial compression of abdominal organs.

TREATMENT

Repair may be made by either an abdominal or thoracic approach. Gross, with an impressive series of 91 repairs and 76 cures, favors an abdominal approach on all babies with congenital herniae. He notes that adhesions are seldom found between the intestinal and pleural structures, and that reduction of the hernial contents is much easier by pulling than by pushing; also, intestinal malrotation, a rather frequent complicating anomaly, can be satisfactorily corrected only from below. Then follows closure of the defect and re-expansion of the lung. The defect is closed by imbricating the edges of the hernial ring, utilizing

nonabsorbable mattress sutures. It is not necessary to denude the edges to obtain a strong union. If the defect is at the periphery of the diaphragm, the firm edge of the hernial ring may be drawn to the costal margin or adjacent rib with nonabsorbable sutures.

All diaphragmatic herniae other than these should be repaired via the transthoracic route. This includes all hiatus herniae, all recurrent ones, and most primary repairs in children over one year of age.

TRAUMATIC HERNIAE

The symptoms are dyspnea, severe pain, cyanosis and, in severe injuries, shock. The thoracic approach is best unless intra-abdominal hemorrhage or perforation of abdominal viscera is a feature.

ESOPHAGEAL HIATUS HERNIAE

These constitute the majority of diaphragmatic herniae seen by the surgeon. Symptoms may vary from "heartburn" and belching to severe vomiting and hematemesis. Dysphagia is the most common complaint. Retrosternal pain is common. Symptoms usually follow a meal, and may be aggravated by the supine position and relieved by vomiting.

Peptic esophagitis and ulceration of the esophagus or of the thoracic stomach is not uncommon. Blood loss from this source may be marked. Eventual cicatricial esophageal stenosis secondary to long-standing esophagitis can occur. Volvulus of the stomach upward into the hernia, with incarceration and obstruction has happened.

MEDICAL TREATMENT OF HIATUS HERNIA

Many small hiatus herniae may be managed medically. Measures used include an ulcer regime, avoiding recumbency after meals, elevating the head of the bed, and avoiding constricting corsets and girdles. Conservative management is also advised in poor-risk cases. Surgical correction is needed in a large number of symptomatic cases.

SURGICAL TREATMENT OF HIATUS HERNIA

In the direct type of hiatus hernia, a variable portion of the stomach slides upward through the enlarged hiatus; the esophagus is pressed upward to enter the most superior portion of the stomach. The esophagus may be contracted and shortened by cicatricial changes—*very rarely* is it congenitally short. This direct type is a true sliding hernia. The anterior half of the intrathoracic stomach is covered by sac, the posterior portion is retroperitoneal and comprises the posterior wall of the hernia.

The para-esophageal hiatus hernia, less common, presents through a defect near the hiatus, and the esophagus is normal in position. Repair is similar to that of the direct type, and usually easier.

TECHNIQUE OF SURGICAL PROCEDURE

A left standard posterolateral thoracotomy is made either resecting the eighth rib or entering through the interspace. The phrenic nerve is not crushed. The hernial protrusion is located, and the mediastinal pleura reflected as two flaps using an inverted T-shaped incision. The esophagus and the herniated stomach are mobilized, protecting the vagus nerves. A counter incision is made in the dome of the diaphragm, the abdomen entered, and the stomach explored. The

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1. Johnson, H. J., Jr.: Am. Pract. & Digest. Treat. 5:862 (Nov.) 1954.
2. Beale, H. D.; Rawling, F. F. A., and Figley, K. D.: J. Allergy 25:521 (Nov.) 1954.

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widely dilated ring edges are approximated posteriorly with heavy interrupted silk sutures, the hiatus now just admitting the index finger along with esophagus and an indwelling Levine tube. The sac is excised, leaving a cuff anteriorly consisting of peritoneum and the fibrous tissue attached to the esophagus. This cuff is brought beneath the diaphragm and sutured to its under surface, thus maintaining the stomach in its normal position and recreating the cardio-esophageal angle. The counter incision in the diaphragm is closed, the lung is reexpanded, and the chest wall closed. Wangensteen suction is continued for a day or two and gradually liquid, soft, and regular diets are given. Intrapleural suction via an intercostal tube is managed as in the usual thoracotomy to ensure full expansion of the lung.

Wisconsin M. J., 56:273-277,1957.

Occupation of White Male Alcoholic Patients

It is likely that the number of alcoholic patients in the upper occupational categories is understated. It is of some interest to know that at least 44% of all male alcoholics under 65 years of age admitted to Connecticut State hospitals are in such categories as professionals, managers and officials, clerical workers, sales workers and craftsmen. As was true in similar studies, alcoholics here were found to have significantly high proportions of single men and men who had been divorced.

Taylor, F. R., *Connecticut M. J.*, 21:703-706,1957.

Medicinal Benefits of Beverage Alcohol

Some common misconceptions concerning alcohol are exposed, and evidence is presented that moderate use may often be advantageous

JOHN STAIGE DAVIS, M.D., *New York, New York*

Despite the existence of alcoholism as a problem, beverage alcohol can be and is a blessing to the vast majority of our patients.

Let us first dispose of some misconceptions. Many patients with heart disease also have kidney disease, and it is often assumed that they must avoid intake of beverage alcohol. There is no evidence that beverage alcohol has any deleterious effect on kidney function. To the contrary, it is an excellent diuretic.

There is no evidence that beverage alcohol *per se* causes hepatic cirrhosis. This is a deficiency disease seen in the livers of alcoholics and total abstainers. The cirrhosis is the result, not of alcohol, but of poor nutrition. Joliffe points out that the person who drinks 20 bottles of sweet, carbonated beverages a day is as likely to develop Laennec's cirrhosis as the person who drinks a pint of whiskey every day.

There is substantial evidence that alcohol in moderation contributes to the general well-being. This alone would make it a valuable adjunct in the treatment of a number of diseases. Beyond this, beverage alcohol is of value in the relief of many specific conditions. Whiskey stimulates the appetite and aids the digestion. It has a carminative effect.

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of the coronary arteries, is valuable in the relief of angina pectoris and in thromboangiitis obliterans, Raynaud's disease, and arteriosclerosis with thrombosis.

Timothy Leary has made the statement: "When I have the body of a patient 65 years of age on the morgue table and I find his aorta as smooth as a baby's skin I know that he has been a long-standing user of alcohol."

Cabot, in a study of 300 cases of alcoholism, found that only 6% showed any signs of arteriosclerosis regardless of age. The theory has now been advanced that the value of alcohol as an adjunct in the management of this disease might be considerable because of its relaxing, euphoric effects.

IN THE AGED

Among geriatricians alcohol has many friends. Pearl showed that moderate drinkers may have a higher expectancy of life than abstainers. Alcohol can quiet an apprehensive, over-wrought patient and lead to a restful night. It can quicken a sluggish appetite and can even supply a few extra calories when total nutrition is a problem.

For those past 60 years of age, a daily drink or two of whiskey appears almost mandatory. For many of those over 40 years of age, it is certainly indicated, for the regressive processes are usually under way by that time.

Stieglitz states, "Alcohol is a vasodilating substance. It is of considerable assistance in the management and control of arteriosclerotic changes in elderly persons. In my opinion, the judicious use of whiskey is indicated in the management of many aged patients, often increasing vigor and endurance."

IN DIABETES

Arteriosclerosis, which insulin is powerless to combat, tends to attack diabetics early and hard. Alcohol is useful in the management of arteriosclerosis and, also in the treatment of diabetes. With alcohol in the diet, it is possible to use a smaller amount of insulin. In a good blended whiskey the sugar content is negligible.

DIGESTION

Alcohol given in small amounts stimulates the flow of gastric, pancreatic and intestinal juices and is a valuable prophylactic of dyspepsia. Alcohol is utilized directly, completely, and economically. It thus conserves other energy material and does not increase the basal heat production.

ARTHRITIS AND RHEUMATISM

Alcohol is no cure for arthritis. The steroid hormones have failed to live up to the expectations held out for them. They do not cure rheumatoid arthritis. In a recent survey of rheumatologists, it was disclosed that 80% of their patients routinely use aspirin to ease the inflammation and pain of rheumatoid arthritis and that few of the polled physicians restrict the use of beverage alcohol.

Cecil has said, "A small drink of whiskey will do much to brighten the end of the day for the arthritic patient and usually gives definite relief from pain." Even in gout, it appears that moderate drinking is nonharmful; and, in a number of cases it has marked analgesic effect.

Beverage alcohol is not for the person who is worried, depressed,

or overtired. On the other hand, in a variety of conditions which the practitioner may face, there are specific indications for the moderate use of beverage alcohol. In small amounts it may be relaxing to the person who is under some tension, who is nervous, or who is comfortably tired. For older persons especially, moderate amounts of beverage alcohol bring relaxation, peace of mind and increased *joie de vivre*.

Virginia M. Month., 84:3-7,1957.

Papilledema No Bar to Lumbar Puncture

In 1933 Schaller took issue with Cushing's statement that lumbar puncture is contraindicated in increased intracranial pressure. He studied 103 unselected such cases. There were 4 deaths, within 13½, 6, 17½ and 40 hours after the procedure. The first patient had a rupture of a vascular sarcoma, the 2nd and 3rd had no evidence of posterior fossa herniation. The 4th case of cystic cerebellar glioma had been considered one of cerebral spinal syphilis and what the author felt to be "improper lumbar decompression and drainage." Schaller concluded that the lumbar puncture procedure is reasonably safe . . . and justifiably indicated because of the information it affords. Ayer and Schwab in the 1955 edition of Baker's *Clinical Neurology* restate Cushing's warning.

Lubic and Marotte have recently reviewed 401 cases of verified brain tumors in which a lumbar puncture was performed. Forty-five of these cases had definite evidence of papilledema; 125 cases (including probably most of the patients with papilledema) had abnormally high initial pressures. They reported only one case (cerebral glioblastoma) in which there was an untoward effect. They felt that lumbar puncture aided in diagnosis but should not be done when a brain tumor is evident. It seems that a lumbar puncture can be performed in a patient with papilledema without fear.

It is felt that the data presented demonstrate:

1. The lumbar puncture is not a dangerous procedure in patients who have ophthalmoscopic findings which might indicate increased intracranial pressure.

2. The lumbar puncture is of diagnostic value in such patients and the spinal fluid findings assist in managing such problems.

Sencer, W., *J. Mt. Sinai Hosp.*, 23:808-815,1956.

The Doctor Builds His Estate

Prepared for the readers of Clinical Medicine by the Research Department of the leading investment banking and brokerage firm of Bache & Co., 36 Wall Street, New York 5, New York

These monthly articles point out one method by which the professional man may overcome the particular handicap imposed upon him by our tax structure, which taxes the bulk of his income at normal income tax rates, as opposed to the capital gains tax avenue open to many business men. One solution to this problem is the systematic investment of a portion of current income each year in securities. Such a program, which should include many different types of investments such as bonds, preferred stock, common shares and shares of mutual funds, will have as its objectives growth of principal together with reasonable income. We again emphasize that even the most complete series of articles of this type cannot take the place of consultation with a representative of a reputable brokerage firm.

Boron chemistry, still in its infancy, holds exceptional promise as the base for exciting new product developments in the decade ahead. While a good deal of current research is kept under security wraps for military and/or competitive reasons, enough is known about the activities of several companies to permit us to form reasonably accurate conclusions for investment purposes. The primary beneficiaries of these events as they unfold, of course, would be those companies having a position in the basic raw material, borax. These companies are three: U. S. Borax & Chemical, controlling about 70% of the free world's known commercial grade ore; American Potash & Chemical, controlling 20%; and Stauffer Chemical, controlling

10%. In addition, Olin Mathieson is emerging as a leader in the production of boron fuels.

It is recommended that positions now be established in stocks of the boron group for the purpose of major long-term capital gains by those willing to assume the risks involved. The speculative risks are highlighted by the fact that most of the issues continue to sell at relatively high price-earnings ratios. Further, they are subject occasionally to wide price swings such as occurred earlier this year when premature speculative activity at one point reached a high pitch.

Boron is found in commercial deposits in association with other minerals, particularly in dried-up lake beds. It is already familiar to us for its long established use as a cleansing agent (Twenty Mule Team Borax) and is also used in large quantities in the glass and ceramics industry and in smaller quantities in many other fields. Production of borate ores for these industries has about tripled in the last 20 years, and doubled in the last 10 years, with about 1 million tons of borax ore having been mined in 1956.

Currently, the major new and most romantic potential applications of boron is in the field of military aviation fuel. Boron, because of its high heat energy content and light weight, has clear advantages for use as jet fuels or rocket and missile propellants. This high energy fuel increases the range of such aircraft markedly and eliminates engine failure at high altitudes. While still quite costly as a fuel, intensive research and increased production in forthcoming years may eventually reduce the price of the fuel sufficiently to permit its use in commercial aviation, an event which would tremendously expand the demand for boron.

But the boron compounds have equal promise in a host of other, non-fuel areas. Standard Oil (Ohio), Richfield and Sunray Oil Companies are currently purchasing growing qauntities of boron for use as an automobile gasoline additive to reduce engine knock and power loss. The pharmaceutical industry is interested in several of the properties of boron and new drug and chemical products may evolve in the near future. General Electric announced that it has developed a substance called borazon reported to be at least as hard as diamonds and thus especially promising for use in industrial tools. A variant of Boron, Boron-10, holds good promise for nuclear reactor compounds particularly in control rods and shielding materials. As a very hard as well as light metal, boron is expected to be used in jet engine turbine blades and nozzles. Finally, certain compounds should be useful in forming high temperature-resistant plastics, a potentially vast field in itself.

U. S. BORAX AND CHEMICAL CO.

U. S. Borax and Chemical derives about two-thirds of its total sales ($50.5 million in fiscal 1956) from borax products and about one-third from potash products, about 90% of which is used in agriculture. The company's borax reserves of 80 million tons represent about 70% of gross free world commercial grade reserves, the ore being extracted from deposits located at Boron, California. U. S. Borax is 74% owned by Britain's Borax (Holdings) Ltd., and the present company was

U. S. Borax & Chemical Co.

Price	51
Yield	1.2%
Dividend	60¢
Range	76¾-49⅜
Traded	N.Y.S.E.

Capitalization (9/30/56)	
Long-term debt	$12,100,000
Common stocks	4,175,000

formed when the Pacific Coast Borax division of the British company was merged in July, 1956, with the United States Potash Company.

On a pro-forma basis, the combined companies' sales have increased from $35.1 million in 1952 to $50.5 million in the fiscal year ended September 30, 1956. Net income in this five-year period has expanded by almost 50% from $4.6 million to $6.8 million.

Currently, the company is nearing completion of a proportionately large capital expansion program involving $20 million. Because of the major increase in boron demand anticipated, the company has decided to switch from underground room and pillar mining methods to open pit mining by stripping the immense overburden to permit larger scale, more economical extraction of all the borate ore in the California orebody.

In addition, the company is constructing new concentrating and refining facilities so that the ore may be processed next to the pit without having to ship it to the company's present refinery 135 miles distant. This program, to be completed late this year, will immediately increase boron capacity by 30% over present near-capacity levels. Moreover, further expansion in future years can now be made at relatively small additional investments.

Earnings in the current fiscal year to end September 30, 1957 are likely to approximate the $1.47 per share earned last year although sales will be higher. However, with capacity increased 30% and with substantial operating savings expected because of the new processing facilities, earnings in the 1958 fiscal year should have little difficulty in exceeding $2.00 per share.

At current prices, these shares are selling at over 30 times reported earnings, thus discounting to a large extent the excellent growth potential of this company. This high earnings multiple makes the risk factor involved in these shares quite substantial, especially if some other material is eventually developed to replace boron. However, those who can afford such speculative features should be rewarded with material capital gains over the next 3-5 years. (Borax Holdings, Ltd., the British parent company, is traded Over-The-Counter at low prices and affords ownership of U. S. Borax at a discount from present market values. These shares, however, do involve the moderate difficulties that accompany ownership in foreign companies.)

AMERICAN POTASH & CHEMICAL CO.

American Potash & Chemical derives its borax, believed to be 20% of the free world's reserves, from the brines of Searles Lake in the Mohave Desert of California. To date, of course, boron activities, though growing rapidly, represent a rela-

American Potash & Chemical Co.			
		Capitalization (12/31/56)	
Price	46⅜	Long-Term Debt	$8,250,000
Dividend	$1.00	Preferred Stock ($100 Par)	5,530,000
Yield	2.1%	Class A Stock	11,000
Range	66¾-45¼	Common shares	1,836,550
Traded	N.Y.S.E.		

tively small part of the company's total sales. Principal company products are sodium, potassium, bromine and lithium chemicals and refrigerants. Sales by customers are 18% agriculture, 11% kraft paper, 9% glass, 4% porcelain enamels and 58% to a host of diversified industries. The company is the sole producer of ammonium perchlorate used as an oxidizer in solid propellants for aircraft.

Company sales in 1956 reached a record of $41.8 million compared with $18 million in 1952. Earnings in this five year period increased 131% to $2.64 per share in 1956 from $1.14 in 1952. Research expenditures amounted to $1.5 million in 1956, 3.7% of sales, a 50% increase over the previous year.

A major portion of this increasing research effort is being devoted to boron research with particular attention being given to the development of the very pure boron grades such as is used in nuclear shielding and other high temperature nuclear applications. American Potash is one of those companies producing the boron gasoline additive for licensees of Standard Oil of Ohio. It is also one of three companies supplying the A.E.C. with lithium hydroxide monohydrate which is used in reactor coolants and nuclear fuel elements.

To advance its position in the defense effort, American Potash purchased National Northern Corporation in January, 1957. This acquisition brings a staff of 50 scientists with experience in explosives and solid propellants for rockets and guided missiles. The new company has also done application research in the boron, ammonium perchlorate and lithium fields, all related to American Potash's regular activities.

The company's financial condition as of December 31, 1956 was good. Current assets were $21.7 million against current liabilities of $9.5 million and long-term debt of $8.2 million.

STAUFFER CHEMICAL CO.

Stauffer Chemical also derives its borax from Searles Lake in California, and the company's reserves are estimated to be 10% of the free world's supply. Stauffer's principal chemicals include sulfuric acid, carbon bisulfide, carbon tetrachloride, clorine and caustic, soda ash and sodium sulfate. About 24% of output is for agricultural uses while the balance is for assorted industrial purposes, such as oil refining, cellophane production, refrigerants and fast-growing aerosol propellants, and paper and glass manufacture.

The company's participation in the borax field resulted from merger with West End Chemical in 1956. West End's sales of $6.5 million were 62% soda ash, 32% borax, 3% sodium sulfate and 3% lime. Of spe-

STAUFFER CHEMICAL CO.

Price	63¼
Dividend	$1.80
Yield	2.8%
Range	83¼-61
Traded	N.Y.S.E.

Capitalization (12/31/56)	
Long-Term Debt	$23,785,823
Common	3,461,787

cid interest, in addition to the borax, the merger with West End brings a good addition to Stauffer's small production of sodium sulfate which should grow substantially in demand because of the large expansion of paper mills west of the Mississippi River.

Since 1952, with the benefit of several acquisitions, sales have increased from $70.2 million to $159.1 million in 1956. Earnings on a per share basis have grown from $2.20 in 1952 to $3.97 last year to which should be added about 45¢ in accelerated amortization.

Stauffer's research expenditures aggregated $2.75 million in 1956, up 24% over the previous year. A further increase to over $3 million is expected this year with principal efforts on boron chemistry and on titanium chemicals and a new process for the production of titanium sponge. The company is a leading producer of boron trichloride which it will supply to Olin Mathieson's new rocket fuel plant at Niagara Falls, N. Y. Stauffer is reported to be the only company shipping this important chemical in ton and tank-car quantities.

Capital expenditures in 1957 should approximate the $17 million spent last year. Among the major additions to be completed this year are a new sulfuric acid facility in California, a petrochemical plant in Kentucky and a new titanium tetrachloride unit. Nearing completion is a new research plant being built to accelerate work in special metals, high energy fuels and organic plastics.

Stauffer's financial condition at the end of 1956 was satisfactory. Current assets were $53.3 million while current liabilities were $14.9 million. Long-term debt of $23.8 million represented 19% of the total capitalization.

Substantially higher research and depreciation expenses this year will probably restrict earnings for the full year to just below the $3.97 reported in 1956. In our judgment, Stauffer represents a more reasonably-priced issue offering participation in both boron and titanium chemicals in addition to its well developing established chemical lines.

OLIN MATHIESON CO.

Olin Mathieson does not have a basic raw material position in boron but it is emerging as one of the leaders in the actual production of high energy fuels under government contracts. Olin has its own $5.5 million semi-commercial fuels plant and it's now building a $36 million Air Force plant more than 12 times larger. Little information is available on actual costs and production, but company officials have stated that within 10 years, high energy fuels alone will be a $1 billion industry.

High energy fuels, of course, still play only a relatively minor role in the total Olin picture. The com-

Olin Mathieson Co.			
Price	49¼	Capitalization (12/31/56)	
Dividend	$2.00	Long-term debt	$194,988,636
Yield	4.1%	Preferred Stock ($100 Par)	$21,224,900
Range	61¾-42½	Common	13,003,571
Traded	N.Y.S.E.		

pany's total sales of just under $600 million are divided between drugs and pharmaceuticals (17%), guns and explosives (19%), fertilizers and phosphates (18%), industrial chemicals (21%), film and paper (13%), and metals (12%).

In addition to the rocket fuels project, long-term prospects are also enhanced by the company's joint $231 million venture with Revere Copper & Brass to produce aluminum. The new affiliate is constructing an alumina plant and a reduction plant in Louisiana and Ohio and related power facilities in Cresap, West Virginia. The new facility is expected to start producing primary aluminum in early 1958. Of total projected capacity of 180,000 tons annually, Olin is obligated to purchase 120,000 tons and Revere 60,000 tons. This low cost supply of metal will do much to help Olin meet the growing needs of its aluminum fabricating facilities. Nearing completion now is a $70 million, 60,000 tons annually rolled aluminum products plant in the Ohio Valley.

Olin has major stock interests in Reaction Motors, Inc., and Marquardt Aircraft Company giving Olin, through these affiliates, an important place in rocket and ramjet design and related military aircraft activities.

In 1952, through the acquisition of E. R. Squibb & Sons, Olin established itself in the fast growing drug and pharmaceuticals industry. Squibb's principal products include antibiotics, vitamins, hormones, anesthetics, diagnostic agents and veterinary preparations. Squibb is cooperating in the National Cancer Research Program, and says that it has developed a new drug that may help in easing or combating certain types of cancer. The effectiveness of this drug, however, has not as yet been fully demonstrated.

Since the merger of Mathieson Chemical and Olin Industries in 1954, sales have increased from $502 million in that year to $597 million in 1956. Earnings on a per share basis have expanded from $3.05 in 1954 to $3.38 last year. The company's financial condition is adequate with current assets of $263 million and current liabilities of $80 million. While the company's long term debt of $195 million is a large 35% of the total capitalization, the bulk of this debt is extremely long-term and does not mature until the year 2054.

Sales and earnings in 1957 are likely to be reported below the record levels realized in 1956. Lower prices for brass products plus the general cost-price squeeze are restricting current earnings. Long-term prospects for the reasons cited, are considered promising and those investors seeking more conservative long-term growth may begin to establish positions at current levels.

Flexilon *(McNeil)*

Combination of a skeletal muscle relaxant *(Flexin)* and an analgesic *(Tylenol)* for the reduction of spasm and relief of pain associated with musculoskeletal disorders. It is nonirritating to the gastrointestinal tract and the enteric coating minimizes the likelihood of gastric upsets. *Indications:* For the relief of muscle spasm and pain associated with common orthopedic and rheumatic conditions. *Dosage:* One tablet three or four times daily during meals or with food. If adequate relief is not obtained, dosage may be increased to 2 tablets three or four times daily. *Supplied:* Bottles of 50 tablets.

Lufa *(U. S. Vitamin)*

Contains unsaturated fatty acids with lipotropic factors to control high cholesterol blood levels. *Indications:* For use to help modify, prevent or correct hypercholesterolemia and atherosclerosis, especially in diabetic, obese and alcoholic patients. *Dosage:* Therapeutic, 6 to 9 capsules in divided doses given with meals. Best given in conjunction with a diet moderate in protein and fats from vegetable sources and low in cholesterol, hydrogenated and animal fats. *Supplied:* Bottles of 100, 500 and 1000 capsules.

Tron-oto *(Abbott)*

Ear drops in solution form. Combination of Tronothane *(Pramoxine)*, a surface anesthetic with low sensitization potential; erythrocin *(Erythromycin)*; and polymixin B, to provide broad spectrum antibiotic action for control of superficial ear infections. *Indications:* Symptomatic treatment for "simple earache" in the external ear; fungus infections of the ear, eczema and inflammation of the external ear. *Dosage:* 3 or 4 drops applied into the external ear three or four times daily. *Supplied:* 5 cc. bottle with dropper assembly.

Phosphatabs *(Warner-Chilcott)*

A swift, simple alkaline phosphatase test that requires no special equipment, other than a centrifuge. *Indications:* For use in the diagnosis of cancer, jaundice, and other diseases of the liver and skeleton. *Administration:* The reagent tablet is crushed in a few drops of serum in a special test tube supplied in the kit. After standing for 12 to 30 minutes, depending on room temperature, a drop of color developer is added. The color chart provides comparisons and indices for preliminary diagnosis. *Supplied:* Kits containing material for 48 tests with a color chart.

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AND
WALK IN

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After you prescribe ALUDROX, you can expect to enter such a report as this in your follow-up record: "Acid neutralization free of drawbacks." For ALUDROX avoids systemic or other handicaps. It avoids laxation (its content of milk of magnesia is right). It avoids constipation (its content of aluminum hydroxide is right). It avoids alkalosis. It avoids acid rebound. And it solves the problem of taste resistance.

In short, ALUDROX outmodes trouble-making antacids. Fresh-flavored, smooth-textured, it encourages patient co-operation. Its formula (one part milk of magnesia, four parts aluminum hydroxide) is the choice of many physicians for fast and prolonged acid neutralization, constipation-inhibiting action, and soothing protection. ALUDROX keeps antacid trouble out of your practice.

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to neutralize,
not penalize

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Filibon *(Lederle)*

Prenatal vitamin-mineral dietary supplement that is phosphorus-free. It also contains ferrous fumerate, an iron salt which greatly reduces gastric irritation and non-inhibitory intrinsic factor which boosts absorption of B_{12}. *Indications:* For use as a supplement to a balanced maternity diet. *Dosage:* One capsule daily. *Supplied:* Decorative, frosted-glass apothecary jars containing 100 small, pink capsules.

Norlutin *(Parke, Davis)*

Oral progestational agent. Biological activity of this steroid is increased because the methyl group at carbon 10 is replaced with hydrogen. *Indications:* Amenorrhea, menstrual irregularity, functional uterine bleeding, infertility, habitual abortion, premenstrual tension and dysmenorrhea. *Dosage:* 5 to 10 mg. daily in divided doses. *Supplied:* 5 mg. scored tablets in bottles of 30 tablets.

Adrestat *(Organon)*

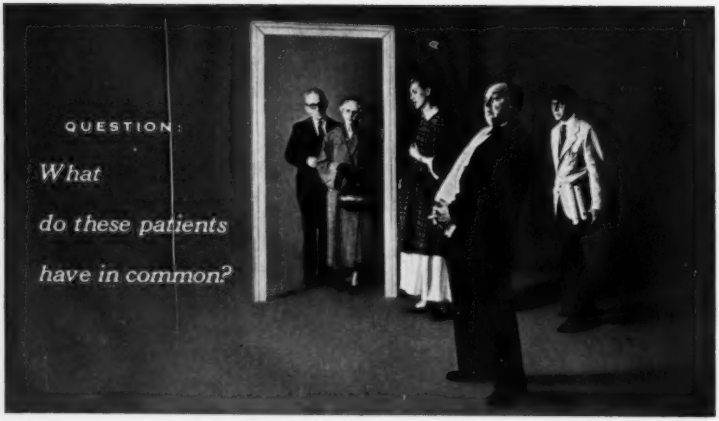
Complete systemic hemostat for prevention and control of bleeding. Adrenochrome semicarbazone (2.5 mg., present as 65 mg. carbazochrome salicylate) promotes retraction of severed capillary ends and increases capillary resistance to trauma. Hesperidin (50 mg.) and vitamin C (100 mg.) act synergistically to strengthen capillaries and correct or prevent abnormal capillary fragility and permeability. Vitamin K (5 mg. sodium menadiol diphosphate) aids in the restoration and maintenance of normal prothrombin levels. *Indications:* Bleeding conditions and operative procedures, including epistaxis, nasopharyngeal surgery, dental surgery, uterine bleeding, and hypoprothrombinemia. *Dosage:* Capsules and lozenges should be taken three times daily for five days preceding and five days following surgery. Prior to surgery, 1 cc. of *Adrestat (F)* is given and may be continued every two hours until bleeding is controlled. *Supplied:* Capsules in boxes of 30; lozenges in boxes of 20. *Adrestat (F)* (containing in each 1 cc. ampul, 5 mg. adrenochrome semicarbazone) is packaged in boxes of five 1 cc. ampuls.

Enovid *(Searle)*

Oral synthetic endometropin for control of menstrual irregularities. This synthetic steroid principally stimulates the endometrium to a luteal phase. *Indications:* Primary and secondary amenorrhea, inadequate luteal phase, dysmenorrhea and premenstrual tension. Cycles may be anovulatory if treatment is begun before the fifteenth day of the cycle, and the first post-therapy cycle may be prolonged for a few days. *Supplied:* Bottles of 50 uncoated, scored, 10 mg. tablets.

Gevral T *(Lederle)*

High potency vitamin-mineral supplement providing more than the minimum daily requirements of vitamins A, B_1, B_2, C, D, and niacinamide. May be administered to all age groups. *Indications:* For use when supplemental requirements are exceptionally high. *Dosage:* One capsule daily. *Supplied:* Jubilee Jars containing 100 capsules.



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They are the pregnant, the aged and the sedentary patient, or the fatty foods fan, who frequently display the classic symptoms of biliary stasis—dyspepsia, eructation, nausea and flatulence.

Cholan V combines two therapeutic actions:

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- Spasmolytic action of homatropine methylbromide—in new therapeutic dosage (5 mg.) for greater effectiveness without sacrifice of safety—to facilitate drainage.

Cholan V

Each tablet contains 250 mg. Cholan DH® (dehydrocholic acid Maltbie) and 5 mg. homatropine methylbromide. One or two tablets t.i.d., after meals. Contraindicated in certain types of jaundice and in complete bile duct obstruction.

Write to Professional Service Department for free sample supply.

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Phenylbutazone

Phenylbutazone was administered for 12 to 54 months to 100 patients with a variety of rheumatoid disorders (84,870 patient days). Sixty patients with rheumatoid arthritis (15 of which were males) received phenylbutazone for 54,180 patient days. At the end of the study all the males and 38 of the females had maintained their original degree of improvement. Three discontinued medication, and one died of hemorrhage from a duodenal ulcer while taking phenylbutazone and hydrocortisone concurrently.

Fifty-three of the 60 with rheumatoid arthritis made an initial Grade-1 or -2 response; 46 of these 53 maintained this response for the duration of treatment. Seven patients with a Grade-3 initial response all maintained the original degree of improvement. None of the seven whose initial response was Grade 3 progressed to Grade 1 or 2 regardless of duration of medication.

Twenty-three patients with ankylosing spondylitis (16 men) received phenylbutazone for 16,650 patient days. All experienced initial major improvement that was maintained throughout the period of medication. Two discontinued medication—one because of nervousness and one because of peptic ulcer.

Kuzell, W. C., *New England J. Med.*, 256:388-392, 1957.

Rolicton, Nonmercurial Diuretic

Rolicton® (amisometradine) was studied in 47 patients, 44 of them class 2 to 4 cardiacs, and three with premenstrual tension and edema. Thirty-six of the 44 cardiac patients had been taking various mercurial and nonmercurial diuretics orally during the previous two years. Because of their ineffectiveness, or of rashes, nausea, vomiting and diarrhea, most of the 36 had ceased to take these drugs or had been taking them only sporadically.

Rolicton was given orally for 12 to 16 weeks, the dosage adjusted to response. During the first five days of treatment, the average loss was 3.4 pounds. In the first 24 cases in which the drug was used, 200 mg. was given three or four times a day. The average loss of weight in these cases was 2.9 pounds. When treatment was begun by administering 500 mg. of the drug, the average loss of weight was 4.2 pounds in five days.

There was an immediate improvement in the symptoms in all 47 cases. Most welcome was the lessening of need for parenteral use of mercurials—by 87%. The drug was well tolerated.

Rolicton is offered as an effective, safe, nonmercurial diuretic for oral use. It appears to be preferable for treating long-standing edema.

Settel, E., *Postgrad. Med.*, 21:186,1957.

Upper Respiratory Tract Infections

Chemoprophylaxis is well worth a trial by the family doctor when he is called to treat a child who has suffered from two or three infections of the upper respiratory tract within a short period of time. If it is instituted promptly and continued for a few months during one or two winters, hypertrophy of the tonsils and adenoids might be avoided. It can be used for children awaiting tonsillectomy as it was in this trial, for at the present time most hospitals have long waiting-lists, and there is often a delay of over a year before the operation is carried out.

Forty-eight children awaiting tonsillectomy were observed for 8 winter months. During this period, they received either prophylactic sulphadimidine or calcium tablets. Half began with 0.5 g. of sulphadimidine daily, while the other half received a calcium lactate tablet identical in taste and appearance. The groups were changed after four months.

Twenty-eight children fared better on sulphadimidine, three were worse, and in 17 there was no appreciable difference. During the period on sulphadimidine, 25 acute infections were recorded, absence from school totalled 30 weeks, and the family doctor was called to treat 25 illnesses. The corresponding figures for the period on calcium tablets were 60 acute infections, 80 weeks lost from school, and 41 illnesses requiring treatment by the doctor.

Tonsillar hypertrophy and cervical adenitis were favorably influenced by chemoprophylaxis, which did not seem to affect nasal obstruction or reduce the incidence of the common cold.

Burke, J. B., *Brit. M. J.*, 4966:538-541,1956.

Treatment of Anxiety

Studies of a small group of patients, using a double-blind control, were used to evaluate the symptomatic relief of anxiety by reserpine; reserpine compared to phenobarbital alseroxylon fraction of Rauwolfia and meprobamate. Each of the 97 patients acted as his own control. In addition, 20 patients were treated directly with rescinnamine, and 14 patients with chlorpromazine. Each drug relieved anxiety in at least 50% of the patients treated. Reserpine, alseroxylon fraction, and meprobamate were superior to placebos. Reserpine was superior to phenobarbital. Rescinnamine had sedative properties comparable to reserpine. Chlorpromazine produced excellent results when given in large doses to patients with marked symptoms.

The occurrence of minor side reactions limits the usefulness of reserpine in anxious patients. Alseroxylon fraction and rescinnamine produced less troublesome reactions. Meprobamate, because of its few side reactions and its effective sedation, was judged to be of most benefit to these patients. Because of the chance of serious complications from the use of chlorpromazine, this drug should be reserved for the most anxious patients, where high doses would be needed.

Hollister, L. E., et al., *Dis. Nerv. System*, 17:9,1956.

Laboratory and Clinical Experiences with Vancomycin, a New Antibiotic

Experiences with vancomycin (Vancocin®) indicate that it is predominantly bactericidal and that it is active primarily against gram-positive bacteria, particularly micrococci. It does not show cross resistance with other antibiotics, has a low toxicity and stimulates only slow and slight development of resistance on the part of micrococci.

The only signs of toxicity were an occasional chill, dermatitis in some persons, and minimal to severe localized phlebitis with multiple intravenous injections.

Vancomycin needs to be given parenterally (at present it is given intravenously) except for the treatment of micrococcal ileocolitis. It would appear to be the antibiotic of choice in the therapy of micrococcal ileocolitis because of its bactericidal effect, and because of the large quantities that are excreted in the stool after oral administration. Preliminary therapeutic results justify further use of this antibiotic, particularly for serious micrococcal infections.

Geraci, J. E., et al., *Proc. Staff Meet., Mayo Clin.*, 31:564-582,1956.

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The ideal cerebral tonic
and stimulant for the aged.

from confusion

to a normal

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NICOZOL relieves mental confusion and abnormal behavior patterns in your senile patients.

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NICOZOL is supplied in capsule and elixir forms. Each capsule or ½ teaspoonful contains:
Pentylenetetrazol.....100 mg.
Nicotinic Acid..... 50 mg.

1. Levy, S., *J.A.M.A.*,153:1260,1953
2. Thompson L., Procter, R., *North Carolina M. J.*, 15:596,1954
3. Thompson, L., Procter, R., *Clin. Med.* 3:325,1956

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Estimation of Blood Glucose Concentration With Ordinary Test-Tape

The separation of plasma (or serum) from the patient's blood obtained by venipuncture may be inconvenient for patient and doctor. The use of capillary blood appears to be equally satisfactory. About 0.5 ml. of blood may be easily collected from an ear- or finger-prick into a small tube (plain oxalate or heparin). After 20 minutes enough plasma or serum will have separated to do the test by dipping the tape.

Test-Tape Determination with Use of Capillary Blood

Test-Tape Reading	Blood Sugar (True Sugar, Mg./100 Ml.)
0	less than 60
+ (1/10%)	60-150
++ (1/4%)	150-250
+++ (1/2%) progressing to	250-400
++++ (2%)	500 and above

The results were reliable at either end of the scale.

Baron, D. N., & Oakley, C. M., *J.A.M.A.*, 164:204, 1957.

Comparison of Tetracycline With Chlortetracycline in Treatment of Pneumonia

Thirty-two patients were treated with tetracycline, 24 with chlortetracycline in a controlled trial of the two antibiotics in clinical pneumonia. The dosage was 0.5 gm. orally every 6 hours for 3 days, followed by 0.25 gm. every 6 hours in either case. Very ill patients received initial intravenous administration of the drugs.

In most cases the pneumonia was pneumococcal. About half of the patients in each group had chronic chest disease.

The results show tetracycline as effective as chlortetracycline in the treatment of bacterial pneumonia. Deaths were few and were confined to elderly patients with serious complicating diseases. Incidence of side-effects was 30% with each antibiotic, most of these mild. This does not confirm the reported lower toxicity of tetracycline.

The only serious complications followed tetracycline therapy were one case each of staphylococcal enteritis, pulmonary moniliasis, and aspergillosis. In the last case the patient died.

Tetracycline suffers from the same disadvantages as other broad-spectrum antibiotics and should be used only with appropriate care and consideration.

Brit. M. J., 5002:1146-1150,1956.

Medical Problems in the Use of Atomic Energy in Industry

The number of cases of serious overexposure to highly penetrating radiations has been very small in the atomic energy industry. Ten cases with two fatalities occurred in the weapons development program within a year of the first military use of the atom bomb. Four nonfatal cases with moderate to small exposures occurred in 1952 at an experimental reactor project. No serious cases have occurred in the atomic reactor production facilities or chemical separations, gaseous diffusion, or metals fabrication plants. A remarkable record, since a standard atomic reaction will accumulate fission products in the order of *millions* of curies of radio-activity, and the total world's production of radium to date is a *few thousand* curies!

Contamination of body surfaces with small amounts of radioisotopes is not uncommon. It can usually be well treated simply by washing with soap (or detergent) and water; when the extent and magnitude of contamination is great, it is necessary to treat such cases in a special decontamination facility.

The most common medical problem with respect to internal deposition of isotopes is the case of exposure to airborne radioactivity of sufficient extent to cause a measurable urinary excretion of isotope. In the overwhelming majority of cases where the excretory levels are below permissible limits, no medical therapy is needed.

The internal deposition of radioisotopes in large amounts, following inhalation, ingestion, or removal from site of a wound contamination, presents a difficult and somewhat discouraging therapeutic problem. The objective is to increase the excretory rates as much as possible. With an isotope such as sodium, mercurial diuretics are used, with large amounts of inert sodium. In the case of tritium, in the form of tritium water, the therapy again consists of large amounts of water and diuretics; in the case of radioiodine, the standard antithyroid drugs which block iodine uptake by the thyroid are used.

For a few isotopes, there are specific nontoxic chelating agents which render the isotope chemically inert and thus block deposition and increase the excretory rate; e.g., the utilization of versene and zirconium for plutonium poisoning. The method is useful only when treatment is started a very short time after exposure. Cases of excessive internal deposition of isotopes are very rare, and a *micro*curie of prevention in the atomic energy industry is worth a *mega*curie of cure.

Albert, R. E., *New York State J. Med.*, 56:3315-3318,1956.

The Use of Drugs Toxic to the Liver

Many patients have been surgically explored on the assumption of an extrahepatic lesion and no stone or neoplasm has been found, but liver biopsy has shown an "intrahepatic block" with mild cholangitis probably caused by Chlorpromazine. Two such cases were encountered and, in one of these, jaundice was still present after over 8 weeks of illness.

Other drugs that may produce hepatic injury are: phenylbutazone, the gold salts, thiouracil, para-aminosalicylic acid (PAS), phenurone and methyl-testosterone.

Before prescribing these drugs and other new ones, the physician should be familiar with the reported experience of *several* reliable authorities, especially as regards potential toxic action. Further, they should not be used in the management of minor complaints. This does not imply that the new and powerful drugs should not be prescribed, but it does suggest that considered judgment be utilized and one should weigh carefully the hazard against the expected benefit of the agent prescribed.

Caravati, C. M., *Virginia M. Monthly*, 83:539,1956.

Serum Sodium Concentration

In cardiac failure, chronic illness, malnutrition and protein depletion, it may be unwise to attempt restoring the sodium concentration completely to normal. Up to now the reason for this has not been clear, but recent work suggests that in congestive heart failure and in cirrhosis of the liver with hyponatremia, there are other osmotically active substances present in the extracellular fluid. It is usually wise to treat acute imbalance vigorously, and to treat chronic imbalance more cautiously and over a period of days. In all instances, diagnosis *ex juvantibus* (observing the response to therapy) is to be borne in mind.

When severe imbalance occurs, it usually indicates a failure of the physician quite as much as a failure of the mechanisms in the patient. It is the duty of the physician to maintain fluid and electrolyte balance until such time as normal function is restored. No physician is capable of administering optimum fluid and electrolyte therapy who does not know the approximate volume and composition of body fluids, as well as those of the fluids being lost by, and being given to, his seriously ill patient.

Mason, E. E., *J. Iowa M. Soc.*, 46:496-500,1956.

AGE . . . In older people, chronic constipation and biliary dyspepsia are often the result of decreased food and water intake, inactivity, intestinal muscle atonicity, increased anorectal disorders, biliary stasis.

for biliary dyspepsia and constipation

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Normally, an insignificant amount of protein appears in the urine. In orthostatic albuminuria, protein in the urine is intermittent. Proteinuria is present in most types of renal disease. Good methods for determining the presence of protein in the urine are the heat-and-acetic acid test and the sulfosalicylic acid test.

Turbid samples of urine must be cleared by filtration, warming or centrifugation. Precipitation ranges from haziness to flocculation in the presence of significant amounts of albumin, globulin, Bence-Jones protein and proteoses. A false-positive reaction upon heating is due to earthy phosphates or carbonates, which disappear upon addition of acid.

The Bence-Jones protein in the urine is precipitated between 50° and 56°C., redissolved at boiling, and reprecipitated on cooling. It is practically pathognomonic of multiple myeloma. Proteins somewhat similar have been observed in osteomalacia, leukemia, in metastatic carcinoma of the bone, and in young persons with hypertension.

Merck Sharp & Dohme Seminar Report, 1:4-5,1956.

Poisonous Plants

The fact that birds or quadrupeds may eat the seeds or fruit of poisonous plants is no criterion for judging the safety for man. A rabbit can eat the leaves of some members of the nightshade family almost with impunity, but all parts of the plant are poisonous for man.

The treatment is, in general, that following ingestion of any toxic substance—prompt removal from the gastrointestinal tract by emesis or lavage, and cartharsis; delay in absorption by the use of activated charcoal or the universal antidote (one part tannic acid, one part magnesium oxide, two parts activated charcoal); precipitation of the toxic substance, such as an alkaloid, by tannic acid alone or the universal antidote; or destruction by oxidation using a 1:10,000 solution of potassium permanganate for the first washing. Adsorbants or precipitants are removed by lavage of the universal antidote (two tablespoons per quart of water) a small amount of the mixture may be left in the stomach. If catharsis is indicated, sodium sulfate two to three gm. in water is a safe and effective agent for a two to four year old child, for an adult 15-30 gm.

It is advisable to empty the stomach by emesis, lavage, or both, and then observe carefully for at least 24 hours.

Shoemaker, H. A., *J. Oklahoma M. A.*, 49:337-339, 1956.

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Bronchogenic Carcinoma: Diagnostic Aspects of 228 Proved Cases

Of 228 patients between the ages of 31 and 80 years with proved bronchogenic carcinoma, 200 were men and 28 were women. The diagnosis was established by biopsy, exploration, or autopsy. A positive diagnosis was made by bronchoscopic biopsy in 92 (40.4%).

Of the 228 patients, 204 (89.9%) smoked; 150 (65.7%) had smoked 20 or more cigarettes daily, or an equivalent amount of pipe or cigar tobacco, for periods of 20 to 45 years; 203 patients (89%) lived in an environment in which the atmosphere contained varying amounts of possible carcinogenic dusts, fumes and chemicals. Sixty-five per cent of the group worked indoors.

The symptoms, in order of frequency, were cough, lingering respiratory symptoms after influenza, chest cold or pneumonia, chest discomfort or pain, dyspnea, and hemoptysis. The average duration of symptoms from onset to positive diagnosis was 7.6 months. The average delay from the first medical consultation to positive diagnosis was 3.1 months. Signs of endobronchial obstruction were the most common physical signs. From the total group, 221 patients (97%) were suspected by the roentgenologist to have bronchogenic carcinoma. Bronchoscopy was of value in establishing the diagnosis by visualization and biopsy of the lesion and by permitting lavage of areas for cytological examination, also in determining operability.

With increased experience, a positive diagnosis of bronchogenic carcinoma was made by cytological examination of bronchoscopically recovered secretions in 55.5%, while such a diagnosis was made with the aid of forceps biopsy in 25.9%.

Steele, C. H., *Laryngoscope*, 67:137-146,1957.

Use of Atomic Energy Cobalt-60 Radiation

The isotope cobalt-60 has been found to be suitable in every respect as the source of high voltage radiation in therapy units. It is equivalent to 3 million volt x-ray. Lesions in the depths of the body can receive a cancerocidal dose without danger of untoward and limiting skin reactions. Cancer of lung, esophagus, pharynx, bladder and cervix can receive more adequate dosages. This radiation spares surrounding normal structures, is kind to bone and cartilage, thus permitting treatment of tumors of bone, antral sinuses, and larynx. It offers the best approach to the treatment of malignant disease known today.

Ajac, J. C., *J. Florida M. A.*, 43:892-894,1957.

Electric Countershock in Ventricular Fibrillation

Ventricular fibrillation, usually rapidly fatal, may occur in cardiac patients, in any patient under anesthesia, and in drowning and electrocution. It is a frequent cause of sudden death in the course of coronary-artery disease, a well-recognized mechanism of Stokes-Adams attacks, an uncommon toxic reaction to digitalis, quinidine and procaine amide, an occasional terminating event in ventricular tachycardia, and a rare complication of cardiac catheterization. In the operating room, ventricular standstill is the usual initial mechanism of cardiac arrest, but ventricular fibrillation occasionally occurs, particularly during hypothermia, or anesthesia with cyclopropane.

The efficacy of this technic in defibrillating the ventricles was clearly established by repeated observations—11 times in four patients—of the immediate termination of ventricular fibrillation after countershock. On one occasion, ventricular tachycardia also ceased after external countershock, suggesting that this procedure may prove valuable in other arrhythmias as well as ventricular fibrillation. We have been able to stop atrial fibrillation, atrioventricular nodal tachycardia, and ventricular tachycardia in the laboratory animal with this technic.

The amounts of current necessary in these cases ranged from 240 to 720 volts. The complete recovery in Case 4 after repeated countershock indicates that external defibrillation can be accomplished without ill effect to the patient.

Although external countershock can be applied easily and quickly, delays in its application constitute the major limitation of successful resuscitation. In Case 4, the resuscitations were accomplished within two to four minutes of fibrillation, since its probability had been recognized and the defibrillator was at hand. In the three patients who died, circulation had been ineffective for seven minutes or more before defibrillation.

Defibrillation may be followed by ventricular standstill or recurrent fibrillation, especially when associated with anoxia from prolonged circulatory arrest. It may then be necessary to apply an external cardiac pacemaker, to use the defibrillator repeatedly and to employ other resuscitative measures such as vasopressor agents and artificial respiration with oxygen.

These episodes occurred in the course of an acute myocardial infarction after the intravenous administration of procaine amide for a rapid arrhythmia, in digitoxin intoxication and in Stokes-Adams disease. The patient with Stokes-Adams disease, who was defibrillated promptly on three separate occasions, recovered completely.

Zoll, P. M., et al., *New England J. Med.*, 254:727-732, 1956.

Total Colectomy and Ileo-rectal Anastomosis in Diffuse Ulcerative Colitis

A series of 47 cases of diffuse ulcerative colitis treated by total colectomy and ileo-rectal anastomosis is analyzed. It is concluded that the operation can be carried out with a low mortality rate and low post-operative morbidity, and that 70% of the patients return to a normal economic and social life. A further 15% have only minor limitations, the result of some frequency of bowel action.

It is suggested that this procedure should be the primary method of choice in the surgery of diffuse ulcerative colitis.

Aylett, S., *Brit. M. J.*, 5017:489-492,1957.

Hypothermia

Our experience in 70 patients subjected to hypothermia with complete arrest of the circulation for 5 to 10 minutes has enabled us to appreciate and to eliminate many of the difficulties and dangers of the technique. The main hazard has been from anoxic brain damage, although many alterations in physiology and the tendency of the ventricles to fibrillate have often diverted attention from the brain. We have had 26 cases of ventricular fibrillation during the cooling or intracardiac surgery with complete recovery in 21, but from absent or poor cerebral circulation for 10 to 12 minutes, there were only 5 recoveries out of 18 cases. We no longer cool adults below 28° C. and in children, whose hearts seem more resistant to ventricular fibrillation, we try not to cool below 26° C.

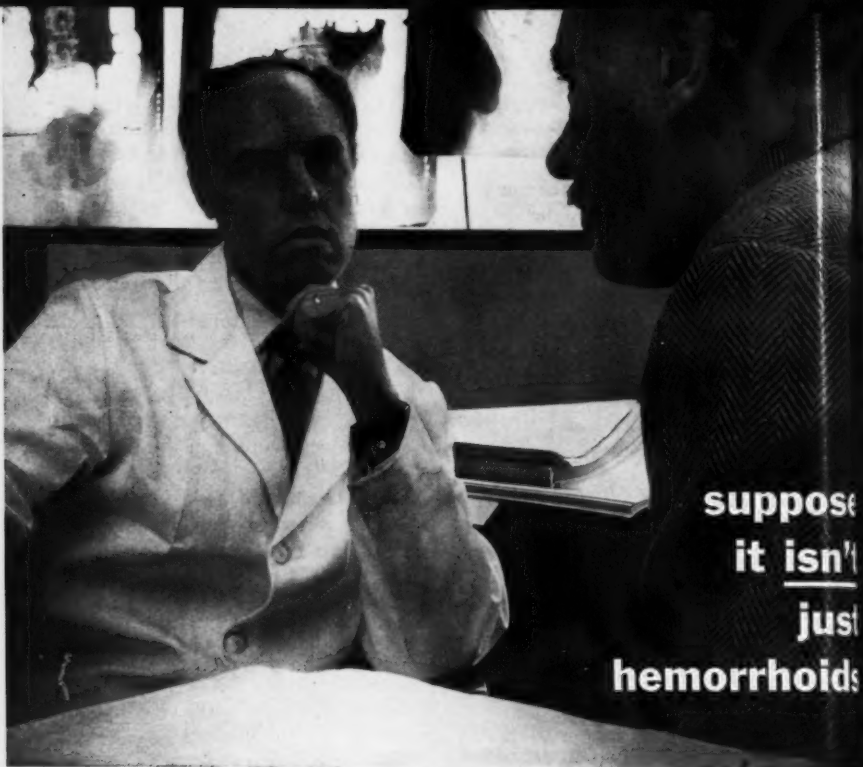
We have given up chemicals like Prostigmin as a method of preventing fibrillation. We minimize all forms of trauma and avoid handling the heart during the cooling. After the period of arrest of the circulation, the venae cavae are released slowly, and in turn, to allow the heart to accommodate the increased load.

Ross, D. N., *Proc. Royal Soc. Med.*, 50:76,1957.

Aneurysmal Bone Cysts of Spine

Aneurysmal bone cysts occur in the spines of children and young adults. Etiology is unknown. Six of seven patients had been given a histological diagnosis of giant-cell tumor. The x-ray signs are cystic expansion of bone with thin rim of cortical bone—this was seen in five of our seven cases. X-ray therapy with partial surgical resection was successful in the treatment of this small series of patients.

Beeler, J. W., *J.A.M.A.*, 163:914-917,1957.



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Anusol provides a safe, proven combination of ingredients which shrink swollen membranes, control inflammation and aid in the healing process. Anusol facilitates the passage of irritating fecal bulk through the traumatized area and does not produce the rectal anesthesia which often aggravates concurrent constipation.

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Sphinecterotomy with instrumentation from below and through the incision in the duct above will relieve a fibrotic stenosis of the ampulla and eliminate the chance of a stone hidden in a recess.

Hawthorne, H. R., *Pennsylvania M. J.*, 60:367-370, 1957.

Adrenalectomy in the Treatment of Severe Arterial Hypertension

No successful means has thus far been devised for selecting patients capable of a highly favorable response to adrenalectomy and sympathectomy. Such a development would greatly extend the sphere of usefulness of the combined operations employed in this study. At present, it appears that such operations should be limited to those with an urgent need for control of their hypertensive disease, and patients who respond poorly to antihypertensive drugs, or are unable to tolerate them.

Wolferth, C. C., *Bull. New York Acad. Med.*, 33: 151-169,1957.

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Perianal Abscesses and Sinuses

Perianal abscesses and sinuses may be either fistulous or nonfistulous. "Fistula" here means a sinus tract connecting with the lumen of the anus or rectum or with a more orad portion of the bowel: 85% of a series of perianal sinuses studied at the Mayo Clinic were of fistulous origin. Most fistulas begin as an infection in an anal crypt (or anal duct); they may be secondary to infection beginning in an anal fissure. Less commonly, fistulas are secondary to, or accompaniments of, inflammatory and malignant ulcers, trauma, and congenital anomalies of the anorectal region; rarely, they result from disease higher in the bowel, such as a ruptured sigmoidal diverticulum. Nonfistulous sinuses generally arise subsequent to, or as accompaniments of, the following conditions: infections arising in sebaceous or sweat glands, pilonidal disease, cysts anterior to the sacrum or coccyx, trauma, osteomyelitis, and abscesses and sinuses peculiar to the perineal region. The use of antibiotics in treatment of these conditions is limited. Treatment is usually surgical.

Hill, J. R., *Texas State J. Med.*, 53:316-319,1957.

Acute Inversion of the Uterus

Though the majority of inversions seem to be due to some error of management, cases of spontaneous inversion have been recorded. In this case, the placenta was expelled by the mother's effort though gentle traction was made on the fetal membranes. The importance of making a vaginal examination in a case of shock following delivery must be stressed, as an incomplete inversion of the uterus may not be diagnosed unless this is done. A plasma substitute was life-saving while blood was being obtained and matched.

Bain, J. T. B., *Brit. M. J.*, 5027:1102,1957.

Surgical Management of Chronic Ulcerative Colitis

Ileostomy leaves the seat of the disorder as a focus of infection. A multistage colostomy greatly increases the surgical risk. In suitable cases a one-stage total colectomy, with removal of the rectum, and ileostomy in one operation has a number of advantages: it avoids multiple operative procedures; the patient is in better condition, building up the patient is easier when all diseased colon is out; and the psychic effect is excellent. Dangers of perforation, peritonitis, hemorrhage, stricture, fistula, abscess and malignant degeneration are reduced.

Fox, J. D., *Am. J. Surg.*, 93:3-26,1957.

Mastoid Surgery

There has been an uptrend in mastoid surgery during the past five years. It does not approach the pre-antibiotic era of the early 30s but is noticeable, considering the total lack of this type of surgery during the 40s.

Smith[1] believes there are several reasons for the apparent upswing, especially among adults. Many of these individuals in the pre-antibiotic era had disease of the middle ear and mastoid that was treated unsuccessfully — medicinally and surgically. The novelty of the antibiotics has worn off and these patients are willing to undergo an improved type of mastoid surgery.

Cancer of the mastoid and middle ear is being recognized. Mastoid surgery for the correction of congenital defects is now possible. Labyrinthotomy for intractable Meniere's disease, via an endural mastoid approach brings tremendous relief to these unfortunate victims. Operations of this type were seldom done 20 years ago.

The return of mastoid surgery in the younger age group is attributed to the increasing number of antibiotic resistant organisms.

1. Smith, G. G., *Minnesota Med.*, 39:778,1956. Editorial, *Illinois M. J.*, 111:255,1957.

Cardiac Arrest

A review was made of 19 operating room deaths which have occurred during 30,000 surgical procedures—an incidence of one in 1,587.

The term "cardiac arrest" should not be used unless it is defined. Operating-room deaths are here divided into primary and secondary cardiac arrests. Primary cardiac arrest is the sudden absence of blood pressure, pulse and respiration. Secondary cardiac arrest is a progressive deterioration, with the ultimate disappearance of blood pressure, pulse and respiration.

There were five primary or true cardiac arrests; an incidence of one in 6,000. There were 14 secondary cardiac arrests. One out of the three patients in cardiac arrest who were resuscitated survived. There was also one survival of the ten secondary cardiac arrests which were resuscitated.

The type of operation did not seem to be significant. Primary cardiac arrest occurred in patients who had not been considered poor risks. Secondary cardiac arrest occurred mostly in the poor-risk patients.

D'Alessandro, G. L., et al., *J. M. Soc. New Jersey*, 53:454-458, 1956.

The Relationship of Hydrocortisone Injections to Cleft Palate in Mice

Hydrocortisone acetate was administered to nine batches of white mice in the latter part of pregnancy. Each batch was injected on a single day of pregnancy; and successive batches were staggered to receive medication on a selected day—one between the ninth and seventeenth day of gestation. The twelfth day of pregnancy was the critical time to administer the hormone if cleft palate were to result. Besides timing, the outcome was determined by the size of the dose used—whether 5 mg. of hydrocortisone acetate was injected as a single dose, or whether the hormone was given in two injections of 5 mg. each. The induced defect was always in the mid-line and not associated with harelip at any time, a finding in marked contrast to the harelip found in association with the inherited cleft in A/jax mice.

Data to date also shows that the acquired, median-line, posterior cleft is dependent upon the state of palatal development reached when the injections were given. The findings indicate that it is not necessary to use mice of particular genetic constitution in order to induce cleft palate as a congenital malformation in a very high percentage of animals treated. A critical prerequisite with hydrocortisone is to initiate treatment several days before the palatine shelves have begun to fuse, a process that normally occurs on or about the fifteenth day of pregnancy in these mice.

Ingalls, T. H. & Curley, F. J., *New England J. Med.*, 256:1035-1039,1957.

Postmortem Cesarean Section

There has been a certain apathy regarding the performance of postmortem cesarean section for at least three reasons:

1. It is rarely successful.
2. It is a sad experience for both attending physician and the surviving family.
3. Certain legal, moral and religious considerations may deter.

The question will arise whether the woman was dead at the moment of the doctor's arrival at the home or when the woman arrived at the hospital.

An infant, delivered May 13, 1956 by cesarean section at the hospital 11½ minutes after the mother's death at home from eclampsia and pulmonary edema, survived and has progressed normally. This outcome should encourage efforts on the part of physicians to save the lives of unborn infants after their mother's death from any cause.

DeKruif, H., *J.A.M.A.*, 163:938-939,1957.

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Prescribe URISED with confidence to relieve frequency, burning, urgency, dysuria, promote rapid restoration of normal urinary function in all urinary affections of all age groups.

1. Strauss, B., Clin. Med., Vol. IV, No. 3, 1957

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Hospital Confinement

It is the author's contention that, so far as possible, all mothers should be "confined" in a hospital. There is no reason why the mother should not be returned home within a few hours of delivery if her condition permits, certainly she should be discharged within two days. Risk of cross-infection increases with the longer hospital stay.

Discharge from hospital after operations can be considerably hastened by the more enlightened surgeon in team-work with the general practitioner, with advantage to all. On the basis of cost alone, a vast amount of money is being wasted by keeping people in the hospital unnecessarily.

Foster, D. S., *Brit. M. J.*, 5027:1120-1121,1957.

Diagnostic Importance of Uterine Artery Size

An unknown number of ectopics each year escape detection with no serious consequences. After encountering one case, subsequent cases were examined periodically during the postoperative course. Arterial hypertrophy usually disappeared in seven to ten days. This suggested that regression in uterine artery size might be of value in diagnosing missed abortion. This can be particularly helpful in obesity or retrodisplacement of the uterus. The diagnosis of missed abortion should never be founded on subjective signs alone, and though decrease in uterine artery size may suggest the possibility of intrauterine death, more objective criteria must be awaited before intervention is undertaken.

Falls, J. L., *Minnesota Med.*, 40:83-85,1957.

Physical Diagnosis

by Simon S. Leopold, M.D., University of Pennsylvania. W. B. Saunders Company, Philadelphia, London. 1957. $9.00

An eminent authority is quoted "Somewhere along the line, the technic and understanding of physical diagnosis has lagged." There can be no doubt that this is generally true, nor that this lagging is to be deplored. The explanation lies in over-dependency on laboratory examinations: the result often is poor diagnosis and poor treatment. Faithful use of this book will teach the reader how to perform the mechanics of physical diagnosis and how to correlate the signs elicited with physiological and pathological changes in disease, to the greater satisfaction of the doctor, and the greater benefit for his patients.

The Crisis in World Population

by J. O. Hertzler. University of Nebraska Press, Lincoln, Nebraska. 1956. $5.00

The preface states that this book seeks to set forth "Some of the main features of the world population situation for college students and interested laymen, many of whom seem to be sublimely unaware of this situation." It is indeed a grave situation, very likely the gravest with which we are confronted. The blithe insouciance with which the "Do-Gooders" decrease the death rate, and increase the birth rate, in countries in which the greatest plague is that of over-population, is astounding to any reasoning person. Sir Alexander Fleming, to whom we owe penicillin, said shortly before his death, "I shudder to think that the discoveries of medicine may save so many from death by disease as to eventually cause more deaths by starvation." Every doctor, every person who is willing to try to think, should read this book and ponder well its contents.

The Care of the Expectant Mother

by Josephine Barnes, M.A., D.M. M.R.C.P., F.R.C.S., F.R.C.O.G., Charing Cross Hospital, London, England. Philosophical Library, New York, 1956. $7.50

This book is written for those who make the millions of antenatal examinations each year—the general practitioners, the local-authority medical officers, the midwives and the medical students. It is a book that takes no extreme position.

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History of the American Board of Surgery 1937-1952

by J. Stewart Rodman, M.D., Emeritus Professor of Surgery, Women's Medical College. J. B. Lippincott Company, Philadelphia & Montreal. 1956. $3.00

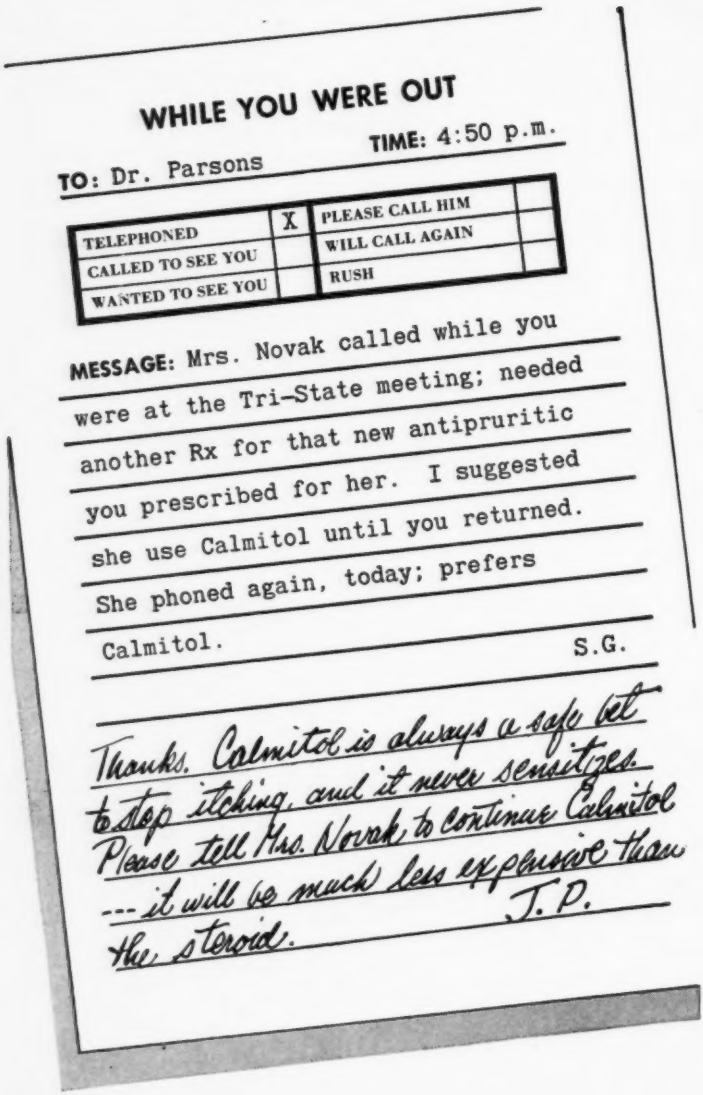
The story of the American Board of Surgery from its organization in 1937 will interest most diplomates of the Board, probably most surgeons, and a great many other doctors of medicine.

Understanding Human Behavior

by James L. McCartney, M.D., F.A.C.P., Vantage Press, New York, New York. 1956. $3.50

A large subject, surely. The author says there is still too much confusion about this subject in the mind of the layman. The general impression among doctors of medicine, other than psychiatrists, is that this confusion applies to all of us, not excepting the psychiatrists, and this impression is here confirmed.

Index to Advertisers



WHILE YOU WERE OUT

TO: Dr. Parsons TIME: 4:50 p.m.

TELEPHONED	X	PLEASE CALL HIM	
CALLED TO SEE YOU		WILL CALL AGAIN	
WANTED TO SEE YOU		RUSH	

MESSAGE: Mrs. Novak called while you were at the Tri-State meeting; needed another Rx for that new antipruritic you prescribed for her. I suggested she use Calmitol until you returned. She phoned again, today; prefers Calmitol.

S.G.

Thanks. Calmitol is always a safe bet to stop itching, and it never sensitizes. Please tell Mrs. Novak to continue Calmitol --- it will be much less expensive than the steroid.

J. P.

*Calmitol is the non-sensitizing antipruritic ointment supplied in 1½-oz. tubes and 1-lb. jars, and (liquid) 2-oz. bottles by THOS. LEEMING & CO., INC., New York 17.